SOUTH AUSTRALIA

ANNUAL REPORT

OF THE

Department of Public Health

AND THE

Central Board of Health

FOR THE

Year ended 31st December, 1962

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1964

THE PUBLIC HEALTH

Annual Report of the Department of Public Health and the Central Board of Health to the Minister of Health (Hon. Sir Alexander Lyell McEwin, K.B.E., M.L.C.)

SIR—We have the honour to submit the report for the Department of Public Health and the Central Board of Health for the year ended 31st December, 1962. The report is divided into the following sections:—

1. Staff and administration.
2. Public Health Branch.
3. School Health Branch.
4. Poliomyelitis Branch.
5. Tuberculosis Branch.
6. Summary and comments.

Sections 2, 3, 4 and 5 deal with branches of the Department and have been prepared by the officers in charge, namely the Principal Medical Officer (Public Health), the Principal Medical Officer for Schools, the Principal Medical Officer (Poliomyelitis) and the Director of Tuberculosis.

1. STAFF AND ADMINISTRATION

Personnel of the Board.—During the year the members of the Board were:—

Chairman—Philip Scott Woodruff, M.D., B.S., D.T.M. & H., M.R.A.C.P.

Members appointed by the Governor—

John Burton Cleland, C.B.E., M.D.Ch.M., F.R.A.C.P.

George Hugh McQueen, M.B., B.S., D.P.H., D.T.M., F.R.S.H., F.R.S.T.M. & H.

Member elected by the metropolitan local boards—

Charles John Henry Williamson, J.P.

Member elected by other local boards—

Alfred Bertram Cox, J.P., F.A.S.A., F.C.I.S.

Secretary—Murray Edwin Stephens Bray.

Staff of the Department.—As at 31st December, 1961, the principal staff consisted of the Director-General of Public Health (Dr. P. S. Woodruff), the Principal Medical Officer (Public Health) (Dr. G. H. McQueen), the Principal Medical Officer for Schools (Dr. C. O. Fuller), the Principal Medical Officer (Poliomyelitis) (Dr. R. R. Horton), the Director of Tuberculosis (Dr. T. G. Paxon) and the Secretary (Mr. M. E. S. Bray). Throughout the year there was an average of 221 officers and employees.

"Good Health."—During the year three booklets were printed and distributed to local boards, medical officers and other interested parties. Some of the subjects in these issues were:—

1. World Health and health nearer home, prevention costs less, the life of your eyes, and a report on a survey of flies and fly breeding.
2. Preventive medicine, the air we breathe, penicillin in milk, diphtheria, and preventing rare tragedies.
3. Lung cancer, heart care, care of aged, food facts, poisons control, pain killing drugs and World Congress on Child Health.

The National Health and Medical Research Council and Committees.—The 53rd session of the Council was held at Parliament House, Adelaide, during May, 1962. The meeting was opened by the Acting Minister of Health, Hon. C. D. Rowe, M.L.C., who welcomed representatives to South Australia. Members of Council expressed their thanks for the welcome extended to them and the facilities made available by the Honourable the Minister and the Department. Dr. P. S. Woodruff attended as the State representative and also at the 54th session held in Sydney in October, 1962.

Two Occupational Health Committee meetings were held during the year and Dr. G. H. McQueen, Principal Medical Officer (Public Health), attended on both occasions. Mr. R. C. McCarthy, Pharmaceutical Inspector attended the meetings of the two sub-committees dealing with Food Standards and Poison Schedules.

Maternal Mortality Committee.—The Committee is widely representative of interested medical groups, and is made up as follows:—

Department of Public Health	P. S. Woodruff, M.D., B.S., D.T.M. & H., M.R.A.C.P., Chairman.
Australian Medical Association	K. F. Cooper, M.B., BS, Member. W. J. Sleeman, M.B., B.S., Member.
Royal College of Obstetricians and Gynaecologists	Sir Francis Matters, M.D., M.S., F.R.C.S., F.R.A.C.S., F.R.C.O.G., Member.
University of Adelaide	Professor L. W. Cox, M.B., B.Ch., F.R.C.S., F.R.A.C.S., M.R.C.O.G., Member Professor J S. Robertson, M.B., B.S., D.Phil., Member.
Queen Victoria Maternity Hospital	F. R. Heighway, M.D., B.S., M.R.C.O.G., F.R.C.O.G., Member.
Queen Elizabeth Hospital	F. E. Welch, M.B., B.S., L.M., D.G.O., D.(Obst.)R.C.O.G., Member.
College of General Practitioners	H. R. H. N. Oaten, M.B., B.S., D.(Obst)R.C.O.G., Member.

The Committee met twice during the year, and considered 17 maternal deaths.

Whenever a death occurs during or shortly after pregnancy, the doctor certifying the death is asked to supply full particulars for the Committee. The response has been very good.

The circumstances and findings are considered by the Committee with a view to discovering any "avoidable factors", whether in available facilities, in medical care, or in the patients own actions, which may have contributed to the unfortunate result.

In each case a copy of the Committee's findings is sent to the doctor concerned.

When a sufficient body of experience has been built up, a consolidated report will be prepared. It is hoped that this will be valuable in improving medical teaching, and practice, and facilities for patient care wherever any deficiencies may have become apparent.

2. PUBLIC HEALTH BRANCH

The report of this Branch is divided as follows:—

(*a*) Staff.

(*b*) Vital Statistics.

(*c*) Legislation.

(*d*) Control of Infectious Diseases.

(*e*) Control of Venereal Diseases.

(*f*) Supervision and Inspection of Environmental Sanitation.

(*g*) Supervision of Septic tank Sewage Disposal Systems.

(*h*) Supervision of Food and Drugs Sold in South Australia.

(*i*) Supervision of Industrial Health.

(*j*) Health Education.

(*a*) Staff

The professional and sub-professional staff of the Public Health Supervisions and Inspection Branch of the Department of Public Health at the end of 1962 consisted of:—

One Principal Medical Officer.

Three District Medical Officers.

Two Part-time District Medical Officers.

One Medical Officer for Gaols and Prisons.

One Chief Inspector.

One Senior Inspector.

Sixteen Inspectors.

One Nurse Inspector.

One Inspector's Assistant.

Fifteen Part-time Inspectors.

Two Pharmaceutical Inspectors.

One Biophysicist.

One Scientific Officer.

One Graduate Technician.

Vacancies existed for one Industrial Medical Officer, one Medical Officer for Aborigines, one Scientific Officer and one Health Inspector for Aborigines.

After a prolonged period of sick leave, Dr. C. M. Deland died on 11th July, 1962. Dr. Deland was appointed a medical officer in the Public Health Department in March, 1950. He was highly qualified as a health officer. He held the Diploma of Public Health and the Diploma of Tropical Medicine from the University of Sydney and he had obtained the Certificate of Tropical Medicine and Hygiene of the Australian Institute of Tropical Medicine in 1926. This Institute later became the School of Public Health and Tropical Medicine at the University of Sydney. Dr. Deland had also had extensive experience as a medical officer and health officer in the British Solomon Islands, the Territory of New Guinea, Papua and the Northern Territory of Australia. During the Second World War, he enlisted for active service and served in the R.A.A.M.C. in Australia and New Guinea.

In the Department of Public Health he was appointed District Medical Officer for the northern and western districts of the State. This position involved a great deal of travelling in the northern "outback" of the State where he became well known to local boards of health, local board officers, and many people living in areas outside local government control. His work in these areas was valued by the people living in them and he was responsible for initiating many far-reaching improvements in the health of these areas.

In 1961 he became the first medical officer to occupy the position of Industrial Medical Officer of the Industrial Health Section of the Public Health Branch. Very shortly afterwards, his health began to fail and it became necessary for him to take sick leave.

Since then it has not been possible to obtain the services of an officer qualified to take the position of Industrial Medical Officer.

During the year, Dr. B. H. Jeanes attended a short course on Occupational Health, arranged by the Post Graduate Committee in Medicine in the University of Sydney at the Sydney School of Public Health and Tropical Medicine and since his return he has assisted with the work of the Industrial Health Section.

Dr. L. G. F. Gillam, who had been acting as a District Medical Officer since his appointment, was granted leave during the year for a period of 12 months, to undertake study in another State.

In October, 1962, Dr. K. J. Wilson was appointed to one of the vacant positions for medical officers in the Public Health Branch.

Dr. A. A. Wallace from Whyalla was appointed medical officer to the Gaols and Prisons Department in March 1962. Dr. L. G. Male was appointed temporarily to that position during the illness of Dr. Wallace and Dr. G. Viner-Smith was appointed on a permanent basis to fill the position in December 1962 following the death of Dr. Wallace.

No applications were received for the position of medical officer for Aborigines.

Mr. G. F. Sweetapple was transferred from the Department of Chemistry and appointed to one of the two positions for Scientific Officers in the Industrial Health Section.

New positions approved for health inspectors during the year were filled by Mr. M. H. Burford, who was transferred from the Department of Agriculture, Mr. L. W. Parker, Mr. R. A. Turner, both of who were appointed from outside the Public Service, Mr. F. J. Wilson, who was appointed from the Port Pirie Local Board of Health, and Mr. M. H. Woolacott who was appointed from the Upper Murray Group of Local Boards of Health.

The position for a health inspector to the Aborigines Department was not filled as there were no suitable applicants for the position.

Miss R. H. Gregory, B.A. (Cambridge), was temporarily appointed as a graduate technician to make a survey of atmospheric mould spores and pollens. Her work will be correlated with clinical investigations in the Allergy Clinics at the Royal Adelaide Hospital and the Adelaide Children's Hospital.

(*b*) Vital Statistics

The following particulars for 1962 have been obtained from the Deputy Commonwealth Statistician. Some figures are subject to slight revision. Details for 1961 are shown in parentheses.

Population.—The estimated mean population for the State in 1962 was 989,400 (969,630).

Births.—The number of births registered during 1962 totalled 21,361 (22,399).

Sexes of Births.—The masculinity ratio, *i.e.,* the ratio of male births to female births, does not as a rule vary greatly from year to year. The 1960 figure of 105.43, however, was rather higher than the 1959 figure of 102.77 which was unusually low, being the lowest recorded since 1936, when the ratio was 102.43. The figure for 1962 was 106.21 (103.68).

Still Births.—These numbered 278 (272). They are not included in births or deaths figures.

Deaths Registered.—A total of 8,232 (7,815) deaths were registered during 1962. The death rate in 1961 continued the downward trend which began in 1956 and reached a new record low of 8.06, the previous lowest rate being 8.126 in 1961. The death rate in 1962 was slightly higher, 8.32 (8.06).

Infantile Mortality.—The infant deaths registered during 1962 totalled 409 (448). The resultant infant mortality rate of 19.15 (20.00) was slightly lower than last year. The rate for 1960 (18.94) was the lowest recorded rate; the previous lowest was 19.88 in 1956.

There were 287 (292) deaths of children under one month, and 122 (156) deaths of children from one month to one year. The main causes are shown in the following Table No. 1.

TABLE 1.—INFANT DEATHS: MAIN CAUSES SOUTH AUSTRALIA, 1957-61

Cause	1958	1959	1960	1961	1962
	No.	No.	No.	No.	No.
Diarrhoea	35	7	8	12	7
Congenital Malformations	85	72	95	102	76
Prematurity	74	69	82	72	77
Injury at birth	50	42	39	46	56
Post-natal Asphyxia and Atelectasis	42	58	28	38	39
Other diseases peculiar to early infancy	41	49	43	65	52
Cerebro-spinal Meningitis	—	1	1	3	—
Meningitis	5	6	5	1	5
Whooping Cough	1	—	1	—	1
Pneumonia	48	44	23	38	47
Hernia and Intestinal obstruction	3	2	6	8	4
External causes	18	19	12	24	11
All other causes	47	53	54	39	34
Total	449	422	397	448	409

Marriages.—The number of marriages registered during 1962 was 7,021 (6,804). The rate per 1,000 of the mean population was 7·09 (7·02).

The mean age of marriage for bachelors was 25·8 (25·7) years and for spinsters 22·4 (22·4).

Summary.—The following Table No. 2, shows the numbers and rates per 1,000 of the mean population of registered births, deaths and marriages and the infantile death rates per 1,000 live births for the years 1958 to 1962.

TABLE 2.—BIRTHS, MARRIAGES AND DEATHS: NUMBERS REGISTERED AND RATES

Period	Births Registered		Marriages		Deaths Registered			
					Total		Infants	
	No.	Rate (*a*)	No.	Rate (*a*)	No.	Rate (*a*)	No.	Rate (*b*)
Year—								
1958	20,047	22·35	6,505	7·25	7,743	8·63	449	22·39
1959	20,372	22·12	6,614	7·18	7,943	8·62	422	20·71
1960	20,966	22·19	6,607	6·99	7,804	8·26	397	18·94
1961	22,399	23·10	6,804	7·02	7,815	8·06	448	20·00
1962	21,361	21·58	7,021	7·09	8,232	8·32	409	19·15

(*a*) Per 1,000 of Mean Population. (*b*) Per 1,000 Live Births.

(*c*) Legislation.

Health Act and Health Act Regulations.—Amendments to the Health Act or Regulations were not made during 1962.

Food and Drugs Act.—Section 61 of the Act was amended to give power to make regulations providing for the inspection and analysis of drugs before their sale, and prohibiting, regulating, restricting or controlling the sale of drugs unless they have been so inspected and analysed.

Regulations under this power are being prepared; they will be designed to bring into effect the recommendations of the National Health and Medical Research Council.

Regulations under the Food and Drugs Act.—Regulations dealing with the sale of controlled therapeutic substances came into force. The drugs of the British Pharmacopoeia and the British Pharmaceutical Codex are controlled and provision is made for the licensing of manufacturers, the keeping of records of manufacture, and for labelling controlled substances.

New Poison Regulations based on the Uniform Schedules recommended by the National Health and Medical Research Council also came into force.

Other Acts and Regulations.—During 1962 there were no amendments or additions to other Acts and Regulations administered by the Central Board of Health or the Department of Public Health.

(*d*) Control of Infectious and Notifiable Diseases and Tuberculosis

Statistics.—Infectious and notifiable diseases in the Second and Third Schedule of the Health Act and tuberculosis are notified to local boards of health and the Central Board of Health. Tuberculosis is notified to the Central Board of Health in the first place.

Those notified in the years 1960, 1961 and 1962 are shown in Table No. 3.

TABLE 3

Infectious Diseases	Cases			Deaths		
	1960	1961	1962	1960	1961	1962
Acute infective encephalitis	10	10	2	2	1	—
Amoebiasis	2	—	1	—	—	—
Diphtheria	1	5	4	1	—	—
Diarrhoea, infantile infective	3	3	—	—	—	—
Dysentery, bacillary	73	97	46	—	1	—
Influenza in epidemic form	12	—	—	—	—	—
Malaria	1	2	1	—	—	—
Meningococcal infection	3	5	10	1	2	2
Ornithosis	2	3	—	—	—	—
Paratyphoid fever	1	1	—	—	—	—
Poliomyelitis	12	44	19	—	3	2
Puerperal pyrexia	3	1	—	—	—	—
Salmonella infection	72	36	69	—	—	1
Scarlet fever	168	129	181	—	—	—
Trachoma	—	124	—	—	—	—
Tuberculosis, pulmonary	255	177	210	36	46	35
Tuberculosis, other forms	33	37	32	3	3	1
Typhoid fever	1	3	1	—	—	—

Notifiable Diseases	Cases			Deaths		
	1960	1961	1962	1960	1961	1962
Acute rheumatism	2	9	10	—	—	—
Brucellosis	—	—	—	—	—	—
Chorea (St. Vitis)	—	1	—	—	—	—
Erythema nodosum	2	1	1	—	—	—
Encephalitis following another disease	16	1	2	—	—	—
Hydatid disease	1	1	1	2	—	2
Infective hepatitis	1,121	1,406	504	10	7	3
Lead poisoning	—	—	1	—	—	—
Ophthalmia	—	—	1	—	—	—
Rubella	105	66	541	—	—	—
Tetanus	3	2	—	2	2	3
Eclampsia	1	—	—	—	—	—
Homologous serum jaundice	—	1	—	—	—	—

Diphtheria.—During the year a child at a school for blind and deaf children developed severe diphtheria. Swabs from 673 contacts were examined bacteriologically and it was found that the child that usually sat next to the patient at the school had diphtheria organisms in its nose. An older siser of this "carrier" also had diphtheria organisms in her throat which was mildly inflamed but otherwise she had no signs of infection.

The strains of *C. Diphtheria* isolated in each case were Gravis type Nadjarian. The patient and the "carriers" had been immunized when infants but had not been given any booster injections since.

Infective Hepatitis.—This disease was made notifiable in South Australia during 1954. The number of reports received each quarter are shown in the following Table No. 4.

TABLE 4.—NOTIFICATIONS OF INFECTIVE HEPATITIS IN SOUTH AUSTRALIA

Year	1955	1956	1957	1958	1959	1960	1961	1962	Totals
1st quarter	72	310	93	50	289	142	490	254	1,700
2nd quarter	103	162	48	38	127	154	237	91	960
3rd quarter	151	158	73	41	106	247	306	74	1,156
4th quarter	176	161	44	178	227	578	373	85	1,822
Totals	502	791	258	307	749	1,121	1,406	504	5,638

From this table it appears that the peak of the first wave of the present epidemic occurred during 1956 and the peak of the second wave occurred at the end of 1960. Since then there has been a fall in the numbers reported each corresponding quarter. Though the number reported during the last quarter (85) of 1962 is higher than the number reported during the previous quarter (74) it is still considerably less than the numbers reported for the last quarters of 1958, 1959, 1960 and 1961 respectively.

Factors responsible for the increased incidence of this disease during last quarters of each year appear to have acted to a less extent during 1962 and it is possible that improved fly control may have been a factor concerned.

Salmonella Infection.—A significant increase occurred in the number of salmonella infections reported during 1962. These were reported sporadically from all places where investigation and isolation of faecal pathogens could be done without much difficulty.

Salmonella typhi-murium was the organism isolated most frequently from patients who were investigated bacteriologically. Other organisms isolated were *S. bovis morbificans, S. newport, S. saint-paul, S. typhi, S. derby, S. potsdam, S. oranienburg, S. adelaide, S. paratyphi B.*

Influenza.—This disease is reported as an infectious disease when local health authorities decide that it is occurring in epidemic form in their areas. Deaths from influenza are recorded irrespective of whether the disease is being notified or not. An illness which appeared to spread throughout the south-eastern part of the State and occurred in some country towns in epidemic form was investigated during the year.

Twenty-one patients, 14 females and 7 males aged from 5½ years to 57 years, were investigated for virus infections. Virus isolations were negative but bloods were tested against nine respiratory virus infections.

The results indicated that the group had been exposed to several respiratory viruses of which influenza B was the most recent and accounted for 60 per cent of the illnesses investigated.

Poliomyelitis.—During the year there was a decrease in the incidence of poliomyelitis. Nineteen infections were reported. Details of the Department's control of this disease are given in the report of the Poliomyelitis Branch.

Tuberculosis.—The death rate from tuberculosis fell to 3.64 per 100,000 of the mean estimated population but the incidence during the year rose to 23.7 per 100,000 of the mean estimated population. Further details of the control of this disease are given in the report of the Tuberculosis Branch.

Rubella.—Rubella was reported in epidemic form from some country towns where children attending school were mostly affected. This accounted for most of the reported increase in the incidence.

Other diseases.—No significant alterations occurred in the incidence of other diseases.

Immunization.—During the later part of the year, Local Boards were urged to ensure that people in their areas who would be concerned with the control of an outbreak of smallpox were vaccinated. Routine immunization against other diseases was continued during the year. A special effort was made to inform recent arrivals in Australia of the facilities available and the need for immunization. A pamphlet in six languages was prepared for distribution to any organization concerned with the welfare of recent arrivals in Australia.

(*e*) Control of Venereal Disease

During 1962, £2,436 was spent by the Department of Public Health on venereal disease investigation and treatment. The majority of this amount was spent on bacteriological and serological tests for private practitioners.

A total of 58 patients was investigated at the Department's Venereal Diseases Investigation Clinic at the Royal Adelaide Hospital.

Gram negative cocci resembling gonococci were seen in smears from seven of these patients and serum from three gave positive gonococcal complement fixation tests.

Contacts of a number of patients being treated by private practitioners for venereal diseases were investigated.

(*f*) Supervision and Inspection of Environmental Sanitation

Routine Inspections.—Officers of the Public Health Supervision and Inspection Branch of the Department are responsible to the Central Board of Health for ensuring that provisions of the Health Act designed to keep the State healthy are carried out. They are also responsible for ensuring that the requirements of the Food and Drugs Act are carried out throughout the State.

The Central Board and officers of the Branch act in an advisory capacity to Local Boards of Health.

During 1962, routine inspections of local board areas were not made. This was due to demands of the staff of work which is the direct responsibility of the Department. However, requests from local boards for advice and assistance have been met. It is considered that routine inspections of local board areas serve a useful purpose in that local board officers can be advised and guided on health matters and inspections should be recommenced as soon as possible when staff is available for this purpose.

Very little work was done in their districts by the three district medical officers as one had study leave for ten months of the year, one was acting as industrial medical officer for most of the year and the position for a third medical officer was vacant until near the end of the year.

Land Subdivision.—During the year a total of 13 areas proposed for subdivision into buildings allotments were submitted by the Town Planner for inspection by officers of the Branch.

The land concerned is investigated to determine whether the size of proposed allotments is sufficient to continually dispose of domestic waste waters having regard to soil type, location, rainfall, slope, underground water and drainage to water catchment areas. In many subdivisions it was considered that the areas of the proposed allotments were not sufficient for continuous disposal of domestic waste waters and larger sizes were recommended.

Air Pollution.—Collection of deposited matter from fifty sampling points in Adelaide and country areas has continued during the year. Observations of smoke emission and inquiries to determine the position of fuel burning apparatus have been made to assist in evaluating the potential problem of air pollution.

Individual complaints about premises being a source of air pollution have been investigated and action taken to prevent further cause of complaint.

Fly Survey.—A survey commenced in 1961 was completed in February 1962. It was found that in the Adelaide metropolitan area there are many potential and actual breeding places. The highest levels of adult flies occur in early and late summer; very hot dry weather and very cold weather reduce the adult population. Western and northern suburbs are more heavily infested than eastern and southern suburbs. This is mainly due to heavier breeding in organic material in stables and market gardens which are more common in these parts of the metropolitan area. A large potential fly breeding area in market gardens north of the metropolitan area could affect overall fly population in the metropolitan area as increases in the adult fly population occur in this area after north winds.

Following the survey, a conference of officers from metropolitan local boards of health was held at which the Department sought their co-operation in a scheme to reduce the problem. Local boards agreed to co-operate and commencing in September a Departmental officer was continuously engaged in co-ordinating and encouraging local board activities. It is proposed to continue this work during 1963.

Industrial Refuse.—The disposal of industrial refuse creates public health problems and a survey was carried out to improve disposal methods.

Plating Waste Disposal.—Methods used in the electroplating trade to dispose of their wastes have been investigated to ensure that subsoil disposal of these wastes is not contaminating underground water supplies. During the survey, handling of cyanides and accident procedures were also checked.

Sanitation Opal Fields.—Visits to Coober Pedy and Andamooka opal fields have been made to encourage residents to improve their primitive methods of nightsoil and refuse disposal. An education programme was followed and the co-operation of the residents sought; however it may be necessary to prosecute recalcitrant residents.

(*g*) Supervision of Septic Tank Sewage Disposal Systems.

Plans and specifications of septic tank sewage disposal systems are required by the Health Act to be submitted to and approved by the Central Board of Health before installations are commenced. All systems are inspected by officers of the Branch before permits to use the systems are issued.

During 1962, 4,583 proposed installations were approved and 3,767 permits were issued. This is again the highest number of installations dealt with in any year so far.

During the year site-inspections were commenced of all proposed septic tank systems in the metropolitan peripheral area before approving plans. These inspections are to ensure that the best use of the site will be made, effluent disposal systems properly located, and errors being made by people installing septic tank systems at present prevented.

A common septic tank effluent drainage scheme at Pinnaroo has been installed and is working satisfactorily. In the Teatree Gully area 12 common drainage schemes serving 479 allotments have been completed and are working satisfactorily. A further four serving 440 allotments are proposed.

Adequate screening of all vents is now required and this is helping to reduce the mosquito problem in the new housing areas.

The necessary inquiries under Sections 528 and 530 (*b*) of the Local Government Act 1961 have been made as required.

During the year the Councils of Stirling, Tatiara and Elliston passed resolutions approved by the Central Board providing for the compulsory installation of septic tank systems in prescribed parts of their districts.

(*h*) Supervision of Food and Drugs Sold in South Australia

Supervision.—The Food and Drugs Act requires the Central Board of Health and local authorities to ensure that food and drugs are sold in a "pure and genuine condition". For this purpose officers of the Public Health Supervision Branch of the Department of Public Health and Local and County Boards are inspectors under the Food and Drugs Act.

These officers inspect places where food and drugs are manufactured, produced or prepared for sale, and ensure that standards of cleanliness and quality are maintained.

Analysis of Food and Drugs.—The Food and Drugs Act provides for taking of samples of food and drugs offered or exposed for sale to determine whether the prescribed standards are being met.

Table No. 5 shows details of samples analysed during 1962, and subsequent action taken.

TABLE 5.—FOOD ANALYSES, 1962

Artical Sold As	No.	Results of Analysis	Action Taken
Aerated waters	2	Conformed with regulations	—
Bread (Vienna)	4	3 deficient in fat or sugar	Warned
Butter	9	2 deficient in milk fat—margarine substituted for butter	Prosecuted
Cheese (imported)	2	Conformed with regulations	—
Cream	23	Conformed with regulations	—
Fish paste	4	2 contained prohibited colouring—Rhodamine B	Warned
Frankfurters	33	Conformed with regulations	—
Honey	1	Conformed with regulations	—
Ice cream mix	11	1 deficient in fat	Warned
Jam	6	Conformed with regulations	—
Milk (canned)	7	Conformed with regulations	—
Milk (fresh)	874	11 deficient in fat or solids	4 prosecuted 7 warned
Minced meat	39	14 contained excess preservative	7 prosecuted 7 warned
Olive oil	1	Failed to conform with B.P. standard	Prosecuted
Rolled beef	4	3 contained preservative	Warned
Sausages	3	3 contained exeess preservative	1 prosecuted 2 warned
Saveloys	21	Conformed with regulations	—
Steak	4	2 contained preservative	Warned
Tomato paste	7	1 deficient in tomato solids	Warned
Tomato puree	1	Conformed with regulations	—
Tomato sauee	11	Conformed with regulations	—
Tomato soup	5	Conformed with regulations	—
Whisky	1	Labelling misrepresentation by hotelkeeper	Prosecuted
Wine (medieated)	2	1 defieient in medication as claimed on label	Warned

Reconstituted Milk.—In late summer some milk producers find difficulty in maintaining the required standard of milk with regard to the solids-not-fat component. The Central Board has power to issue permits for the reconstitution of milk where premises and equipment are suitable, and may specify the ingredients which will be used. The Central Board may also permit this milk, which must be pasteurized, to be sold as pasteurized milk.

The policy of the Central Board is to permit the addition of skim milk powder only.

Three companies were given permits by the Central Board of Health during 1962 to add skim milk powder to milk and to label it "Pasteurized Milk" and to sell it as such. Under these permits 10,085 lb. of skim milk powder were added to 820,816 gallons of milk deficient in solids-not-fat to bring the solids content up to required standard before pasteurization. The product was then pasteurized and put in containers labelled "Pasteurized Milk".

Before permits were granted manufacturers' premises, and equipment to be used in the reconstitution of milk, were inspected and in each case considered to be suitable by officers of the Department.

Desiccated Coconut.—Samples were taken from approximately 10 per cent of all containers of desiccated coconut imported into South Australia from overseas during 1962. These samples were submitted to the Institute of Medical and Veterinary Science for bacteriological examination.

When pathogens are isolated from any sample, coconut in all containers in the shipment bearing the same brand as the container from which the sample was taken are destroyed under the South Australia Food and Drugs Act.

Pathogens found in two samples involved the destruction of approximately one ton of desiccated coconut in 21 containers. These were all from Ceylon. The pathogen isolated was *S. waycross.*

Supervision of Wines and Spirits.—During 1962 wines and spirits offered for sale in 309 licensed premises were tested. The premises included hotels, wine saloons and stores in metropolitan and country areas.

A total of 5,868 samples of wines and spirits were tested, this being an average of 19 tests per visit.

Samples which were shown to be not of the required standard were obtained from four premises.

The Central Board authorized legal proceedings under the Food and Drugs Act against two of the licensees concerned and issued warnings to the remainder.

Microbiological testing.—In conjunction with the institute of Medical and Veterinary Science a survey was made of various methods of washing drinking utensils used in common to ascertain the efficiency of various washing methods. Following the results of this survey the Food and Drugs Regulations were amended to provide a prescribed method of washing these utensils.

During the year samples of "Certified Milk" proposed to be supplied to school children were checked to ensure they complied with the standard required for "Certified Milk" and other requirements for milk supplied to school children under the Milk for School Children Scheme.

Food Handlers.—Meetings for food handlers were conducted at Kimba, Cowell, Cleve, Tumby Bay, Cummins and Woomera. These meetings were well attended and provide a means of educating these people in correct food handling methods.

Meat.—Supervision of slaughterhouses outside the metropolitan area supplying meat in the metropolitan area has continued. There are five of these slaughterhouses dressing approximately 1,515 carcasses per week.

The Northern Territory supplied 22,898 lb. of boneless beef and 300,380 lb. of boneless buffalo to a local trade during the year. Consignments of this meat are accompanied by certificates of inspection from the Animal Industry Branch of the Northern Territory Administration.

Dangerous Drugs.—Regular inspections of authorized users of dangerous drugs were carried out during the year. The rate of inspection has been stepped up following the appointment in 1961 of a second pharmaceutical inspector.

Poisons.—The advent of the uniform poisons schedules has been welcomed by manufacturers because it will eventually mean that one common label for poisonous substances will be accepted in all Staes. There has been considerable activity in checking labels based on the new schedules.

One case of the sale of restricted poison without prescription by a pharmacist was detected; legal proceedings are pending.

Food Standards.—A considerable number of draft uniform standards were examined by the Advisory Committee and those recommended for adoption include Food Colours, Meat and Meat Products, Canned Meat Balls, Jelly Crystals, Food Additives, Fish and Fish Products.

The Committee also considered proposals dealing with the manufacture of ice cream, the dating of bottled milk, colours for drugs, tin plate, advertising of food, sale of Thalidomide, plastic poison bottles and thickened cream.

(*i*) Supervision of Occupational Health

Staff and Administration.—The staff of this sub-section now consists of a scientific officer, who was appointed late in 1962, a bio-physicist who is on loan from the Mines Department, and two inspectors.

Since the death of Dr. C. M. Deland, the medical officer of the section, the majority of the work of the Industrial Medical Officer has been done by Dr. B. H. Jeanes.

During the year it was noticeable that there was an increasing awareness of the existence of this section of the Department. This was shown by the number of requests for information and practical aid, by other Government Departments, private firms, medical practitioners and individuals. It is also gratifying to record that a number of workers have been referred by private medical practitioners for investigation of illnesses suspected to be due to their employment. It is hoped that this service will be increasingly used.

New Equipment.—Apparatus has been purchased for climatology study, gas and vapour collection and analysis. A Kitagawa gas analyser should prove a most versatile instrument and have a wide range of use in this field.

The appointment of a scientific officer with a background of chemistry will mean that in 1963 a considerable amount of basic equipment and chemicals will be needed for elementary assay work.

Surveys and Investigations.—During the year, 60 plating shops, in which cyanide is used, were investigated and a number of deficiencies noted. Special attention was given to methods of purchase and storing of materials, first aid equipment, knowledge and planning, and waste disposal. Means of rectifying deficiencies noted are under consideration.

Cholinesterase estimations have been done on a number of people using organic phosphate insecticides and it is hoped to expend this investigation when certain difficulties are overcome.

The study of atmospheric pollution in the Adelaide metropolitan area, which was commenced in 1961, was continued and a report of results submitted to the Minister of Health and later reprinted in "Good Health for South Australia." Investigation of atmospheric pollution is continuing at Port Augusta, Port Stanvac, Angaston and, in conjunction with the Mines Department, at Port Pirie.

Timber preservation plants throughout the State were inspected and the information gained will be used to formulate recommendations for safe operation at these plants.

Other investigations have included estimations of amounts of chromates, acids, alkalis, oil fumes and mists, sulphur dioxide, phosphine, lead and ammonia in the air at places where these substances are produced. A mineral grinding plant, the milling of plastic materials, dust from sand blasting and fibreglass treatment, and welding fumes at Whyalla shipyards were investigated. Noise levels at Port Stanvac refinery were also tested. Reports and recommendations dealing with hazards to health discovered were submitted.

Ionizing Radiations.—Inquiries have revealed at least 350 X-ray units in South Australia in use in the fields of medicine, dentistry, research and industry.

Small but growing amounts of a wide range of radioisotopes are also entering the State, principally for medical and research investigations.

Radioactive Substances and Irradiating Apparatus Regulations under the Health Act to control possible hazards became law on 1st April, 1962.

Under these Regulations, licences are required to import, sell, possess, or use radioactive substances and irradiating apparatus. Irradiating apparatus must also be registered.

Applications received and licences granted to date (February 1963) are shown in Table No. 6.

TABLE 6

Types of Applications.	Received.	Licences Granted.
To import or sell radioactive substances	1	1
To use radioactive substances	63	58
To import and sell irradiating apparatus	1	1
To use irradiating apparatus	203	33
To register irradiating apparatus	118	7 (1st unit) 48 (other than 1st unit)

This field is a new one, and the Department is handicapped by limitations of staff, experience, facilities and equipment.

A number of inspections have been made of places where radioactive substances and ionizing apparatus are in use and inquiries answered.

Negotiations are in progress with Commonwealth X-ray and Radium Laboratories, Melbourne, to establish a film badge service in South Australia. It is estimated that approximately 1,500 people will require regular monitoring for exposure to ionizing radiation.

Industrial Hygiene Committee.—The principal Medical Officer attended two meetings of the Occupational Health Committee of the National Health and Medical Research Council during the year.

Conferences and Study Courses.—Mr. D. H. Kelly, one of the two inspectors working with the section, attended a Clean Air Conference sponsored by the University of New South Wales and held from 19th to 21st February, 1962. The subjects considered were clean air investigations, techniques of sampling and evaluation of results and methods of control.

Mr. A. S. Wilson, the bio-physicist, attended the Annual Meeting of Scientific Officers engaged in the Field of Industrial Hygiene, held in the School of Public Health and Tropical Medicine, University of Sydney, on 22nd February and 23rd February, 1962. Ten officers from five States and the Commonwealth were present. Topics discussed included:—

(*a*) methods of sampling and analysis of chlorinated and aromatic hydrocarbons, phosphine, and pesticides. New South Wales supplied data on work associated with organic phosphorus compounds and cholinesterase estimations.

(*b*) dust counting techniques.

(*c*) hazards associated with the use of ionizing radiations in New South Wales, Victoria and South Australia.

General motions carried at the Meeting included the following:—

(1) that a submission be prepared on the organization appropriate to the preparation of standard methods of sampling and analysis for industrial hygiene purposes,

(2) that scientific personnel with similar interest in private industry and other Government Departments be invited to attend these meetings,

(3) that an attempt be made to feature some particular aspect of industrial hygiene work at each meeting,

(4) that the Occupational Health Committee of the National Health and Medical Research Council be requested to arrange for the circulation of information derived from the testing of respiratory protective devices.

These meetings are important as they take stock of work done on a Commonwealth wide basis in the field of Industrial Hygiene and help mould the shape of future scientific activity in the field.

Following the close of formal business, the meeting was addressed by Dr. M. Katz, Consultant on Atmospheric Pollution, Department of National Health and Welfare, Canada.

Several officers of the Department attended a convention on Industrial Safety, sponsored by the Department of Labour and Industry and held on November 7th and 8th. The Department of Public Health showed an exhibit on Radiation and Hearing Safety and Dr. G. H. McQueen read a paper entitled "The Medical Side of Safety" to one of the discussion groups.

Dr. B. H. Jeanes attended a course on Occupational Health in Sydney for three weeks in July and August. This was organised by the School of Public Health and Tropical Medicine and dealt largely with the problems confronting doctors in this field.

Medical Examinations.—Persons examined included applicants for permanent appointment to the South Australian Public Service, and to become subscribers to the South Australian Superannuation Fund. The latter group included employees of the State Bank, Institute of Technology, Institute of Medical and Veterinary Science and Australian Mineral Development Laboratory. A total of 599 people were examined and the papers of a further 147, examined elsewhere in the State, were checked.

In addition, there were some 20 examinations of persons to determine fitness to continue duty, or for retirement on medical grounds from the South Australian Public Service and eligibility for Superannuation benefits.

At the closure of the Uranium Treatment Plant at Port Pirie, 52 employees were medically examined, and many more had X-rays and blood samples checked.

No evidence of disease attributable to exposure to radiation was found, but several other unsuspected conditions requiring attention were discovered. At least one of these was of a serious nature, requiring fairly urgent treatment.

The value of these medical examinations cannot be over-emphasized, as they provide a health service to Government employees, as well as serving their primary object of determining fitness for specified purposes.

(*j*) Health Education

One of the most important functions of a Health Department is health education and every opportunity is taken by officers of the Branch to assist with the health education projects of the Department.

"Good Health" and "Newsletters for Medical Officers of Health".—The Department publishes a magazine containing information on public health matters, and articles for *Good Health* are written by officers of the Branch on subjects relating to their work in the Department.

Each month a newsletter containing brief items of current public health interest is sent to local board officers of health and secretaries.

Items in newsletters during 1962 included notes on diseases reported during the previous year, reconstituted milk, accidental poisoning of children, "booster" injection in routine immunization procedure, diphtheria, Early Notification of Births Act, houseflies, Regulation 12 of the Food and Drugs Regulations, smallpox vaccinations, comparison of diseases reported during 1961 in Australian States and suitable hats for summer wear.

In addition, a list of diseases reported to the Central Board of Health during the previous month is given.

Royal Society of Health.—Candidates for diplomas of the Royal Society of Health may obtain theoretical training at the Institute of Technology, where lectures are given by the Chief Inspector.

Correspondence courses for candidates in the country are arranged by the Technical Correspondence School of the Education Department.

Material for the courses is prepared by the Chief Inspector and the Senior Inspector. These officers also correct the assignments of students taking these courses.

Examinations for the diplomas are conducted by the Society's Board of Examiners in South Australia.

At examinations held during 1962, 28 candidates sat for the Public Health Inspector's Diploma, and eight sat for the Meat and Other Foods Inspection Diploma. Of these, 14 obtained the Health Inspector's Diploma and three the Meat and Other Foods Inspection Diploma.

Other Health Education Projects.—Officers of the Branch assisted during the year with many special health education projects arranged by the Department, local boards and various other organizations. The Department's 16 mm. movie film projector and 35 mm. slide projector were used extensively in these projects.

3. SCHOOL HEALTH SERVICES

During 1962 there were several important staff changes. It is with regret that we record the death of Dr. Donald M. Steel, whose part time services had been of great value to the Section. Another part time officer, Dr. W. J. W. Close, retired and these two part time positions were replaced by full time positions. The professional staff at the end of the year consisted of Principal Medical Officer, eight full time medical officers, one part time medical officer (four days per week), one senior dentist, nine dental officers, ten nurses, ten dental assistants, one full time audiologist and one consultant audiologist, and two audiometristes. The clerical section was increased to three under the Chief Clerk.

Medical examinations other than those of school children exceeded three thousand for the first time. This constitutes an important and growing aspect of the section's work and necessitated a replanning of the processing, recording and filling systems.

Medical Services

The number of children examined in State schools was 69,410 in 1962. This figure included 69,093 children seen in schools by medical officers of the School Health Services and 317 children seen by local doctors in Eyre Peninsula and Woomera schools acting on behalf of this section. The school enrolment in 1962 was 183,873. To achieve the aim of an examination for each child every three years, it is necessary to see at least one third of the total enrolment each year. In 1962, this figure of one third has been exceeded. Medical officers of the Department visited 258 schools during the year and Eyre Peninsula and Woomera doctors visited three schools.

The following table (Table No. 7) shows the number of schools visited, children examined and defects noticed by medical officers of the School Health Services:—

TABLE 7.

	Metropolitan	Country	Total
Schools visited	106	152	258
Children examined	50,528	18,565	69,093
Defects found—			
Vision (excluding spectacles)	3,018	1,225	4,243
Wearing spectacles	3,483	1,029	4,512
Hearing	1,036	417	1,453
Nose and throat	657	121	778
Teeth (excluding children under dental treatment)	7,896	3,746	11,642
Heart	271	86	357
Skin	969	308	1,277
Lungs	126	49	175
Epilepsy	61	14	75
Allergies	1,992	758	2,750
Other conditions, including leg deformities, cerumen, colour blindness and enuresis	4,982	2,027	7,009
Total defects recorded	24,491	9,780	34,271

TABLE 8.—A COMPARISON OF THE PAST THREE YEARS

	1960	1961	1962
Schools visited	235	252	258
Children examined	54,040	68,071	69,093
Defects found—			
Vision (excluding spectacles)	3,814	3,884	4,243
Wearing spectacles	3,384	3,669	4,512
Hearing	1,261	1,916	1,453
Nose and throat	562	809	778
Teeth (excluding children under dental treatment)	11,118	13,004	11,642
Heart	306	346	357
Skin	1,154	1,498	1,277
Lungs	147	139	175
Epilepsy	57	78	75
Allergies	2,571	3,232	2,750
Other conditions, including leg deformities, cerumen, colour blindness and enuresis	8,554	10,740	7,009
Total defects recorded	32,928	39,315	34,271

To enable comparisons to be made with other years, Table 9 shows, for the last seven years, the rates per 10,000 children examined of certain defects formally notified to parents.

TABLE 9.—DEFECTS NOTICED PER 10,000 CHILDREN EXAMINED.

Year	Vision	Hearing	Nose and Throat	Teeth	Heart	Allergies	Epilepsy
1956	738	244	303	2,599	52	*	*
1957	622	180	231	3,009	48	315	5
1958	605	213	166	2,444	61	321	10
1959	776	140	146	2,092	60	364	12
1960	706	233	104	2,059	57	476	11
1961	571	282	119	1,912	51	475	11
1962	615	211	113	1,687	52	398	11

* Not recorded.

Notices were sent to the parents of 11,642 children needing medical attention. Children already under private dental supervision and children who were examined by departmental dentists are not included in this figure.

Eyre Peninsula Scheme.—Doctors residing at six centres on Eyre Peninsula assisted the School Health Services by examining children attending schools in their area. Sixty-three children attending two schools were examined. The Department appreciates the work of those doctors who have been able to continue their programme during 1962. It is anticipated that more doctors will be able to participate in 1963. Woomera—254 children examined by resident medical officers on behalf of this Department.

TABLE 10.—EYRE PENINSULA SCHEME

Schools visited	2
Children examined	63
Defects formally notified:—	
Vision (excluding spectacles)	10
Wearing spectacles	3
Hearing	4
Nose and throat	2
Teeth	12
Heart	1
Skin	1
Lungs	2
Allergies	—
Epilepsy	—
Other conditions (not classified)	13
	48

Examinations carried out by School Health Services staff at 169 *Rundle Street, Adelaide.—*

(1) *Medical Examinations of School Children seen at School.*—Children may be asked to attend head office for further assessment of a particular defect before being referred on to their family doctor, hospital, or eye specialist. Teachers and parents occassionally bring children to head office for advice and assessment of a particular problem. During 1962, 190 children were seen for visual assessment and 26 children seen for cardiac assessment (including electrocardiograms).

(2) *Medical Examinations Apart from School Children.*—3,054 students entering or leaving the Teachers Colleges, or applying for Leaving and Leaving Honours Teaching Scholarships, Junior Teaching positions, and Laboratory Assistantships were medically examined in 1962. Teachers referred by the Education Department were seen before returning to duty from sick leave. All applications from teachers for invalidity pensions were considered and where necessary, the applicants were examined. Direct entrants to the service and teachers applying for superannuation were also examined. A total of 506 teachers were seen during 1962. 65 children travelling interstate with cricket, basketball and football teams were medically examined. Examinations were also undertaken for 86 female public servants seeking permanent appointment or superannuation. Total examinations were 3,711.

Health Lectures.—Dr. C. O. Fuller continued lecturing at Wattle Park Teachers College and gave six lectures weekly for the full academic year. In the third term, Dr. Fuller and Dr. Sprod gave the series of special subject lectures to students at Adelaide Teachers College, Western Teachers College and Currie Street Annex. Dr. Sprod also continued lecturing to the short course groups at Currie Street Annex. Examinations were set and marked by the two officers.

Following a report from the Principal Medical Officer and Mr. H. Mutton to the Education Department relating to Health Education courses in the Teachers Colleges a committee has been formed of the health lecturers from each college to further examine the position.

Mothers' Clubs.—There were a number of requests for speakers at Mothers' Clubs and School Welfare Clubs. Eleven clubs were addressed by medical officers and dentists of this Section.

Paediatric Refresher Course.—Permission was granted for medical officers to attend the Paediatric Refresher Course at the Adelaide Children's Hospital. The Principal Medical Officer and three doctors attended.

Follow-up Work.—This was continued by the School Nurse detailed for this work who was assisted from time to time by the senior nurse. Sixty-three metropolitan schools were visited once. Twenty-seven of these schools were visited a second time when outstanding cases were further investigated and the parents were either visited or contacted by telephone. Forty-seven home visits were made.

First Follow-up—(63 schools).

1,433 had received attention.

652 had received no attention.

Second Follow-up—(27 schools).

195 had received attention.

104 had received no attention.

Defect Notices.—Under an arrangement approved by the Australian Medical Association 2,416 forms S.H.S. 5 were returned by doctors and specialists to whom children were taken by parents. Their co-operation is gratefully acknowledged as it enables this section to complete their records and follow the progress of these children.

S.H.S. 5 Forms returned—

Metropolitan 1,813

Country 603

Audiometric Testing.—Audiometric testing was conducted in 134 schools and 14 pre-school kindergartens associated with the Kindergarten Union of South Australia Incorporated. A total of 56,921 children had pure tone audiometer tests. These tests were carried out by medical officers, audiometristes and school nurses. Of the children tested 1,748 were found to have some hearing loss at the time of testing. Parents were notified accordingly and arrangements were made, where possible, for further tests by the Deafness Guidance Clinic in their sound-proof room. Statistics of the audiometric tests are shown in Table 11. These figures are independent of Table 7.

TABLE 11.—AUDIOMETRIC TESTING IN SCHOOLS

	Pre-school Kindergartens	Metropolitan Schools	Country Schools	Total
Schools visited	14	121	113	248
Children tested	658	41,956	14,307	56,921
Defects	13	1,334	401	1,748

The number of audiometric tests made in the sound-proof room of children referred by all officers was 1,781.

Infections in School Children.—The numbers of communicable diseases reported to teachers in State schools are shown in Table 12.

TABLE 12.

Year	Diphtheria	Scarlet Fever	Measles	Rubella	Whooping Cough	Chicken Pox	Mumps	Polio-myelitis	Infective Hepatitis	Other Conditions
					Communicable Diseases					
1958.....	—	131	3,469	232	163	2,078	987	2	53	116
1959.....	2	154	943	110	39	1,948	2,374	—	110	106
1960.....	—	163	3,707	68	117	1,588	2,436	—	387	85
1961.....	1	130	766	67	51	2,438	461	1	359	113
1962.....	—	171	4,494	686	91	1,804	962	2	107	49
					Communicable Diseases per 10,000 Children Enrolled					
1958.....	—	8·5	225·4	15·0	10·6	135·0	64·1	0·1	3·4	7·5
1959.....	0·1	9·4	58·0	6·7	2·4	119·9	146·2	—	6·7	6·5
1960.....	—	9·5	218·0	4·0	6·9	93·4	143·2	—	22·6	4·9
1961.....	—	7·4	43·2	3·7	2·9	137·7	26·0	—	20·3	6·4
1962.....	—	9·3	244·0	37·3	4·9	98·0	52·3	—	5·8	2·7

The total number of these communicable diseases reported was 8,366.

Deafness Guidance Clinic

The Deafness Guidance Clinic completed its fifth year with a total of 1,781 attendances by children. Of these 1,126 were initial attendances and 655 were retests. The staff was increased by one when Dr. N. Eadie was transferred from the medical section to full-time work as an audiologist with the Clinic. Appointments are now offered on a five day a week basis.

The 1,126 new cases came from the following groups:—

Pre-School	49
Primary school	954
Secondary School	123

They were referred from the following sources:—

Officers of School Health Service (Doctors and Audiologists)	930
Family Doctor	93
Parents	57
Others (Kindergarten Union, Teachers Psychology Branch and various)	46

The 655 retests came from the following groups:—

Pre-school	26
Primary School	526
Secondary School	103

Of those attending for initial tests, 395 were discharged as having no significant hearing loss, 434 were referred to their family doctors and 67 to specialists or hospitals. Two hundred and thirty with doubtful losses were requested to return for further testing before final assessment.

Of those attending for retest, 202 were discharged, 210 were referred to family doctors, 33 to specialists or hospitals and 210 were requested to return for further testing before final assessment.

The liaison with the Education Department through the Advisory Panel for Deaf and Hard of Hearing children has been maintained. The monthly lists of all children discovered to have a significant loss have been continued and 255 were made the subject of specific letters. Of these 142 were discovered at the initial test.

In addition to children seen, tests were carried out on 76 student teachers, scholarship applicants and public servants.

TABLE 13.—ATTENDANCES AT DEAFNESS GUIDANCE CLINIC, 1962

Total Attendance

	Male	Female	Total
Metropolitan Pre-school	36	22	58
Metropolitan Primary School	764	499	1,263
Metropolitan High School	145	46	191
Country Pre-school	10	7	17
Country Primary School	120	97	217
Country High School	27	8	35
Government Departments	54	22	76
	1,156	701	1,857

Visits

	Male	Female	Total
Initial visit	753	438	1,191
Retests	403	263	666

Disposal

General Practitioner	Otologists	A.C.H.	R.A.H.	Retests	Discharges
646	59	37	6	444	665

Two hundred and fifty-five of these cases were referred to the Advisory Panel for Deaf and Hard of Hearing Children.

TABLE 14.—HEARING TESTS AT SCHOOLS, 1962

Schools Visited	Schools	Males	Females	Total	Defects	
					Males	Females
Children Tested at Primary Schools						
Metropolitan—						
Doctors	51	11,859	11,124	22,983	333	237
Audiometristes	42	6,658	5,926	12,584	325	232
Children Tested at High Schools						
Doctors	28	5,181	1,208	6,389	164	43
Audiometristes	—	—	—	—	—	—
Children Tested at Pre-school Kindergartens						
Audiometristes	14	347	311	658	9	4
Total Metropolitan, Primary, High and Pre-school Children tested—Doctors and Audiometristes	135	24,045	18,569	42,614	831	516
Children Tested at Primary Schools						
Country—						
Doctors	96	5,257	4,807	10,064	169	141
Audiometristes	—	—	—	—	—	—
Children Tested at High Schools						
Doctors	17	2,294	1,949	4,243	56	35
Total Country Primary and High Schools tested—Doctors and Audiometristes	113	7,551	6,756	14,037	225	176
Grand Total—Metropolitan and Country	248	31,596	25,325	56,921	1,056	692

TABLE 15.—DEAFNESS GUIDANCE CLINIC, 1962

Initial Tests

	Male	Female	Total
Pre-school Children—			
Metropolitan	24	13	37
Country	7	5	12
	31	18	49
Primary School Children—			
Metropolitan	495	320	815
Country	74	65	139
	569	385	954
High School Children—			
Metropolitan	88	19	107
Country	15	1	16
	103	20	123
Government Departments	50	15	65
	753	438	1,191

Referrals

School Health Services	930
Kindergarten Union	7
Doctors	93
Parents	57
Government Departments	67
Teachers	9
Psychology	18
Various	10
	1,191

Disposals

	General Practitioner	Otologists	A.C.H.	R.A.H.	Retests	Discharged
Pre-school	19	1	—	—	8	21
School age	415	29	34	3	222	374
Government Departments	1	2	—	—	4	58
	435	32	34	3	234	453

One hundred and forty-two were referred to the Advisory Panel for Deaf and Hard of Hearing Children.

TABLE 16.—DEAFNESS GUIDANCE CLINIC, 1962

RETESTS

	Males	Females	Total
Pre-school Chidren—			
Metropolitan	12	9	21
Country	3	2	5
	15	11	26
Primary School Children—			
Metropolitan	269	179	448
Country	46	32	78
	315	211	526
High School Children—			
Metropolitan	57	27	84
Country	12	7	19
	69	34	103
Government Departments	4	7	11
	403	263	666

DISPOSALS

	General Practitioner	Otologists	A.C.H.	R.A.H.	Retests	Discharged
Pre-school	8	—	—	—	7	11
School Age	202	27	3	3	203	191
Government Departments	1	—	—	—	—	10
	211	27	3	3	210	212

One hundred and thirteen children were referred to the Advisory Panel for Deaf and Hard of Hearing Children.

SCHOOL DENTAL SERVICES

Policy.—Departmental policy has remained unchanged. Children are treated yearly and figures have again indicated that a school population of some 600 to 700 children can be covered by one dentist, once the back-lag of work in a new area has been overcome.

Areas for future expansion have been determined and arranged in order of priority.

When a new area is commenced children in Grades 1 to 3 are offered a comprehensive service, while an emergency service is offered to Grades 4 to 7. This enables the dentist to visit as many schools as possible in the first year. In the second year, the comprehensive service is extended to Grades 1 to 5, and by the third or fourth year a comprehensive service is offered to Grades 1 to 7. The work load is then the maintenance of those children already treated and the annual intake of Infants and Grade 1 five year olds. As already stated, this represents some 600 to 700 children.

Staff.—The year began with 1 senior dentist, 9 dentists and 10 dental assistants on strength. Mr. B. H. Kidd resigned in January and was replaced by Mr. W. K. K. Wan, a recent graduate from the University of Adelaide Dental School.

Dental Studentship Scheme.—The number of students in training at the Dental School was maintained at twelve, a level which will supply sufficient graduates to operate nine areas, assuming that all graduate and remain in service only for the three year period of their bond.

Work in Country Schools.—Yearly treatment of children in the nine established areas was continued in 1962. 6,179 children were offered treatment and 5,136 accepted it; an average acceptance rate of 83.1 per cent which compares with 82.3 per cent of the previous year.

Children examined	10,385
Children offered treatment	6,179
Children accepting treatment	5,136
Fillings inserted	19,431
Extractions	3,342
Other Treatments	6,936
Number of visits for treatment	14,181
Number of schools visited	77

Average treatments required overall were:—

Fillings	3.8 per child
Extractions	0.7 per child
Other treatments	1.3 per child

Compared with the 1961 figures of:—

Fillings	4.1 per child
Extractions	0.9 per child
Other treatments	1.2 per child

The filling : extraction ratio showed an improvement:—

1961—4.8 : 1

1962—5.8 : 1

Work in Children's Welfare Institutions.—Work was continued in Children's Welfare Institutions during school holidays, when emphasis was placed on treatment of conditions requiring prompt attention rather than on complete treatment for individual patients.

For this reason, the numbers of children treated are not shown, as figures so produced, would be misleading.

In Children's Welfare Institutions:—

Fillings inserted	1,690
Extractions	184
Other treatments	605
Number of institutions visited	6
Number of visits for treatment	1,093

General.—Seven dentists are equipped with mobile caravans but two are still working from boxed equipment. It is hoped that all dentists will operate in caravans in the near future.

4. POLIOMYELITIS BRANCH

Incidence.—During the year ended 31st December, 1962, nineteen cases including two deaths were reported. The yearly cases reported since the last epidemic started in May 1949 appear in Table 17.

TABLE 17.—REPORTED CASES OF POLIOMYELITIS IN SOUTH AUSTRALIA, 1949-1962.

Year	Cases			Deaths		
	Metropolitan Area	Other Districts	Total	Metropolitan Area	Other Districts	Total
1949	490	90	580	15	5	20
1950	816	157	973	7	10	17
1951	1,012	479	1,491	39	23	62
1952	435	274	709	7	5	12
1953	287	111	398	11	10	21
1954	123	53	176	2	3	5
1955	110	72	182	5	1	6
1956(*a*)	58	64	122	2	1	3
1957	5	11	16	1	—	1
1958	5	5	10	1	1	2
1959	1	—	1	—	—	—
1960	9	3	12	—	—	—
1961	33	11	44	3	—	3
1962	10	9	19	1	1	2

(*a*) The Salk immunization programme started in South Australia on 28th June, 1956. Table 20 shows the number of reported cases accepted as poliomyelitis since that date.

(Note: A case "reported" does not necessarily mean that it was confirmed as poliomyelitis. The number of cases accepted for statistical purposes, after full investigation, is shown in Table 20.)

Of the nineteen cases of suspected poliomyelitis reported during 1962, eighteen were considered to be suffering from poliomyelitis; details of these nineteen reported cases are shown in Table 18.

TABLE 18.—DETAILS OF NINETEEN SUSPECTED CASES REPORTED IN YEAR ENDING 31ST DECEMBER, 1962

Case No.	Age	Sex	Specimens Available	Virus Isolated	Muscle Paralysis	No. of Salk Injections
			Regarded as Poliomyelitis			
1	19 months	Female	Yes	‡	Yes	—
2	28 years	Female	Yes	Type 3	Yes	—
3	2·9 years	Male	Yes	Type 1	Yes	1
4	39 years	Female	No	No	Yes	—
5	4 years	Male	Yes	Type 3	Yes	—
6	37 years	Male	Yes	No	Yes	—
7	28 years	Female	Yes	No	Yes	—
8	30 years	Male	Yes	Type 1	Yes	—
9	32 years	Female	Yes	Type 1	Yes	—
10	2·10 years	Female	Yes	*	Yes	—
11	27 years	Male	Yes	*	Yes	—
12	2·3 years	Male	Yes	Type 1	Yes	—
13	2·8 years	Female	Yes	Type 1	Yes	—
14	9 months	Female	Yes	*	Yes	—
15	10 years	Female	Yes	Type 1	Yes	—
16	2·8 years	Female	Yes	Type 1	Yes	—
17	4 years	Male	Yes	Type 1	Yes	—
18	7 years	Male	No	No	Yes	1†
			Not Regarded as Poliomyelitis			
1	54 years	Male	No	No	Yes	3

Cases 2 and 4 were fatal: both patients were adults and had received no poliomyelitis immunization injections.

* Virus isolated: not yet identified.

† ? one injection in New South Wales: no record available.

‡ Specimen of sera suggested poliovirus Hype 3 infection.

Virus Isolation.—It will be seen from Table (18) that eight poliovirus isolations during 1962 were Type 1, and two isolations were of Type 3. The two poliovirus Type 3 isolations were made early in the year. All subsequent isolations were of poliovirus Type 1. Table 19 sets out the types of poliovirus isolated in South Australia since 1956.

TABLE 19.—NUMBER OF EACH TYPE OF POLIOVIRUS ISOLATED FROM SOUTH AUSTRALIAN SPECIMENS FROM 1956-1962

Year ending	Poliovirus Type 1	Poliovirus Type 2	Poliovirus Type 3
31st December, 1956	3	2	18
31st December, 1957	3	—	4
31st December, 1958	—	—	—
31st December, 1959	1	—	—
31st December, 1960	15	—	—
31st December, 1961	1	—	35
31st December, 1962	8	—	2

Investigation and determination of cases.—Since the start of the Salk programme on 28th June, 1956, reports of suspected cases have been investigated, as far as possible, by the Principal Medical Officer (Poliomyelitis) and details have been sent to the Commonwealth Surveillance Committee which meets in Melbourne. The members of this specialist committee make the final decision on whether a case should be regarded as poliomyelitis or not, in assessing statistically the efficacy of the "Salk" vaccine. From 28th June, 1956, to 31st December, 1962, details of two hundred reported cases of suspected poliomyelitis were referred to the Committee; 141 of these cases were accepted as poliomyelitis.

Of the 141 poliomyelitis patients, 13 only (all within the age group 0-14 years) had started a course of immunization injections. None of these patients had received three "Salk" immunization injections.

Of the 128 cases of poliomyelitis in patients who had received no injections, 68 were children in the age group 0-14 years: and, 60 were persons over 15 years of age.

This means that in South Australia between 28th June, 1956, and 31st December, 1962, there have been 128 accepted cases of poliomyelitis in NON-immunized persons, 13 cases in partly immunized persons; and, none in persons who had received three injections. Table 20 shows these decisions, of the Surveillance Committee on South Australian cases from 28th June, 1956, to 31st December, 1962.

It should be noted that the Surveillance Committee figures are based on the date of onset of the illness, and not on the date the case was reported.

TABLE 20.—RESULTS OF CASES DETERMINED BY SURVEILLANCE COMMITTEE IN THE PERIOD 28TH JUNE, 1956, TO 31ST DECEMBER, 1962. (BASED ON DATE OF ONSET OF ILLNESS AND NOT DATE OF NOTIFICATION.)

Period	Total Cases Considered by Committee	Not Poliomyelitis		Poliomyelitis							
				0-14 Years				Over 15 Years			
		0-14 Years	Over 15 Years	No. of Injections Received				No. of Injections Received			
				0	1	2	3	0	1	2	3
Six months ending 31st December, 1956	58	7	3	26	3(*a*)	—	—	19	—	—	—
Year ending 31st December, 1957	33	9	6	3	1(*b*)	1(*c*)	—	13	—	—	—
Year ending 31st December, 1958	31	13	15	1	—	—	—	2	—	—	—
Year ending 31st December, 1959	3	1	—	2	—	—	—	—	—	—	—
Year ending 31st December, 1960	10	1	1	7	1(*d*)	—	—	—	—	—	—
Year ending 31st December, 1961	46	1	—	21	3(*e*)	2(*f*)	—	19	—	—	—
Year ending 31st December, 1962	19	1	1	8	2(*g*)	—	—	7	—	—	—
	200	33	26	68	10	3	—	60	—	—	—

Note—1956 (*a*) These three patients, who were reported during the six months ending 31st December, 1956, developed poliomyelitis within a week of attending for their first injection; all three had been sick prior to the injection. The investigation showed that each of these children was infected with poliomyelitis before the first injection was given and it could not be expected that the vaccine would prevent development of the disease in these circumstances. These three patients really should be regarded as NON-immunized subjects.

1957 (*b*) This child received one injection only. As no specimens for laboratory investigation were made available, it was not possible to confirm, or exclude, the diagnosis of poliomyelitis. It was decided to accept the case as poliomyelitis for statistical purposes.

1957 (*c*) This child of six years had received two injections. Again no specimens could be obtained and the diagnosis of poliomyelitis, whilst not proven, was accepted.

1960 (*d*) This three year old girl received one injection a year before her illness and had not attended for her second and third injections when they were due.

1961 (*e*) These three children, aged 1.3 years, 2.8 years, and 2.8 years, who contracted poliomyelitis in 1961, had each received one injection only; this first injection was received seven months, twelve months, and sixteen months respectively before the illness.

1961 (*f*) These children aged 9 months, and 9 years, also contracted poliomyelities in 1961 before completing their immunization. The 9 months old child received a first injection two months, and a second injection one month, before her illness; the 9 years old child received a first injection twenty-one months, and a second injection eighteen months before his illness.

1962 (*g*) On the day the first child was unwell, he was taken for his first poliomyelitis immunization injection; it was not to be expected that this injection could in any way have helped him. The other child was said to have possibly received one injection a long time ago in New South Wales; no record card was available, and a medical practitioner relation of the child was doubtful whether an injection had been received or not.

Number of fatal cases.—Of the 141 cases of Poliomyelitis accepted by the Surveillance Committee, seven were fatal. The years in which these occurred were as follows:—

1956	1 death—30 years of age.
1957	Nil.
1958	Nil.
1959	Nil.
1960	Nil.
1961	4 deaths—Ages 38, 26, 25, 28 years.
1962	2 deaths—Ages 39, 29 years.

As was previously pointed out, the Surveillance Committee figures are based on the date of onset of the illness, and not on the date the case was reported. This accounts for two deaths being shown here as occurring in 1962. The 29 year old male patient took ill, and died, in December, 1962. As his illness was not reported until January, 1963, particulars do not appear in Table 17 or 18.

Poliomyelitis immunization injections.—The number of injections given from the start of the programme on 28th June, 1956, to 31st December, 1962, appears in Table 21.

TABLE 21.—INJECTIONS GIVEN SINCE CAMPAIGN STARTED.

28th June-31st December, 1956	223,979
1st January-31st December, 1957	401,683
1st January-31st December, 1958	266,164
1st January-31st December, 1959	306,463
1st January-31st December, 1960	156,165
1st January-31st December, 1961	33,263
1st January-31st December, 1962	189,035
	1,576,752

NOTE.—(*a*) The small number of injections given in the year ending 31st December, 1961, resulted from poliomyelitis vaccine not being available during most of the year—due to a prolonged production breakdown in the Commonwealth Serum Laboratories, Melbourne.

(*b*) The breakdown of this total number of 1,576,752 poliomyelitis injections into first, second, third and fourth injections, and in age groups is shown in Table 22.

TABLE 22.—SEPARATION OF FIRST, SECOND, THIRD AND FOURTH POLIOMYELITIS INJECTIONS GIVEN FROM 28TH JUNE, 1956, TO 31ST DECEMBER, 1962. NOTE.—THIS TABLE DOES NOT INCLUDE QUADRUPLE ANTIGEN INJECTIONS

	0-14 Years	Over 15 Years	Total
First injections	329,654	225,667	555,321
Second injections	318,545	209,481	528,026
Third injections	290,510	171,566	462,076
Fourth injections	17,795	13,534	31,329
	956,504	620,248	1,576,752

The following table (Table 23) has been prepared to show the age group response trends each quarter over five and a half years of immunization. It should be noted that the figures for the year 1961 do not reflect a response trend; they were determined by insufficient poliomyelitis vaccine being available during that year.

TABLE 23.—POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN EACH QUARTER—IN AGE GROUPS—FROM 28TH JUNE, 1956, TO 31ST DECEMBER, 1962.

Quarter ending—	Pre-school Age	School Age	15 Years and Over	Total
30th September, 1956	19,837	74,726	2,442	97,005
31st December, 1956	38,552	86,223	2,199	126,974
31st March, 1957	39,464	54,595	3,106	97,165
30th June, 1957	23,350	85,287	3,308	111,945
30th September, 1957	25,553	56,898	5,423	87,874
31st December, 1957	40,276	55,534	8,889	104,699
31st March, 1958	10,460	12,474	10,544	33,478
30th June, 1958	16,455	19,316	35,893	71,664
30th September, 1958	15,553	3,505	52,095	71,153
31st December, 1958	16,135	3,482	70,252	89,869
31st March, 1959	12,719	2,596	56,384	71,699
30th June, 1959	15,698	3,419	73,075	92,192
30th September, 1959	16,979	2,511	62,743	82,233
31st December, 1959	15,086	1,979	43,274	60,339
31st March, 1960	14,470	1,962	36,735	53,167
30th June, 1960	15,086	1,871	30,980	47,937
30th September, 1960	13,294	1,686	17,923	32,903
31st December, 1960	8,845	1,089	12,224	22,158
31st March, 1961	1,258	133	1,119	2,510
30th June, 1961	1	Nil	49	50
30th September, 1961	5,768	861	5,296	11,925
31st December, 1961	13,042	671	5,065	18,778
31st March, 1962	26,322	3,638	18,556	48,516
30th June, 1962	15,409	2,763	20,393	38,565
30th September, 1962	11,626	4,863	11,493	27,982
31st December, 1962	26,747	16,337	30,888	73,972
Total	457,985	498,419	620,348	1,576,752

The figures given in this report are those of poliomyelitis ("Salk" alone) injections. They do not include the 15,293 quadruple antigen injections given during the short time that this antigen was available. Details of quadruple injections given appeared in the previous Annual Report.

Up to 31st December, 1960, all poliomyelitis immunization injections were given by the Poliomyelitis Services staff. During late 1961, poliomyelitis vaccine was made available for the first time to other authorities, such as Local Boards of Health. Table 24 shows the poliomyelitis immunization injections given during 1962. It shows applicants' years of birth, first, second, and third injections; and, it separates the number of injections given by the Poliomyelitis Services staff from other agencies.

TABLE 24.—POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN FOR THE YEAR ENDED 31ST DECEMBER, 1962, BY VARIOUS AGENCIES. INJECTIONS CLASSIFIED IN FIRST, SECOND, THIRD, AND FOURTH; AND IN APPLICANTS' YEARS OF BIRTH.

Year of Birth	Poliomyelitis Services				Local Boards of Health				Special Groups				Total			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
1962	1,284	707	11	—	2,866	1,772	57	—	61	36	3	—	4,211	2,515	71	—
1961	4,870	4,449	1,689	34	8,060	8,454	4,280	112	161	160	36	—	13,091	13,063	6,005	146
1960	1,831	2,279	3,140	429	3,301	4,973	5,314	668	86	80	61	8	5,218	7,332	8,515	1,105
1959	1,121	1,217	1,725	449	2,007	2,409	3,036	584	45	52	84	20	3,173	3,678	4,845	1,053
1958	603	612	719	524	846	870	1,062	732	19	30	37	26	1,468	1,512	1,818	1,282
1957	359	331	390	523	622	576	580	913	25	24	17	25	1,006	931	987	1,461
1956	284	276	243	412	522	393	374	1,214	8	12	12	18	814	681	629	1,644
1955	190	191	176	381	449	288	283	1,181	8	12	9	18	647	491	468	1,580
1954	205	170	168	354	368	277	265	1,189	9	7	12	19	582	454	445	1,562
1953	182	162	147	308	379	269	203	1,147	5	8	8	16	566	439	358	1,471
1952	194	167	141	273	325	239	214	1,177	8	11	10	14	527	417	365	1,464
1951	137	103	90	205	303	177	138	1,162	1	5	5	14	441	285	233	1,381
1950	98	77	48	224	189	119	90	1,215	3	3	6	19	290	199	144	1,458
1949	81	65	44	196	141	86	94	980	2	3	3	14	224	154	141	1,190
1948	82	72	51	148	114	81	63	844	2	1	6	6	198	154	120	998
1947	86	62	54	140	88	70	66	786	2	3	7	7	176	135	127	933
1946	76	59	45	112	63	47	39	561	—	2	—	8	139	108	84	681
1945	62	47	31	110	47	28	35	293	1	—	2	7	110	75	68	410
1944	95	83	42	95	60	47	32	239	10	3	—	6	165	133	74	340
1943	135	96	60	88	69	60	50	186	6	6	3	7	210	162	113	281
1942	216	181	110	81	153	129	98	157	27	19	8	7	396	329	216	245
1941	461	406	240	85	276	264	190	153	28	24	12	8	765	694	442	246
1940	537	497	319	93	295	275	218	136	40	35	13	10	872	807	550	239
1939	579	519	335	108	357	355	254	153	40	35	10	9	976	909	599	270
1938	607	558	373	146	398	392	296	206	44	32	12	11	1,049	982	681	363
1937	594	567	391	158	408	416	306	191	34	29	18	11	1,036	1,012	715	360
1936	615	548	390	185	364	357	291	217	36	32	19	7	1,015	937	700	409
1935	537	490	341	174	310	305	260	213	28	25	19	13	875	820	620	400
1934	470	458	322	180	319	307	287	246	28	22	13	8	817	787	622	434
1933	499	481	375	198	289	296	267	263	31	21	5	7	819	798	647	468
1932	480	424	348	167	277	272	265	288	22	18	17	10	779	714	630	465
1931	451	421	305	191	276	276	251	300	20	16	8	6	747	713	564	497
1930	503	463	313	204	325	310	279	310	25	23	12	16	853	796	604	530
1929	436	427	335	191	305	286	232	331	22	23	9	15	763	736	576	537
1928	397	381	322	185	284	283	250	357	29	21	12	11	710	685	584	553
1927	411	360	316	171	297	275	237	330	17	15	8	14	725	650	561	515
1926	385	374	291	171	278	266	249	349	23	20	7	9	686	660	547	529
1925	396	362	239	148	261	254	202	328	23	16	4	3	680	632	445	479
1924	388	373	243	154	250	262	212	309	9	13	5	8	647	648	460	471
1923	337	318	243	99	257	235	165	274	14	11	7	6	608	564	415	379
1922	332	303	218	105	222	198	184	271	12	6	—	3	566	507	402	379
1921	302	276	228	89	197	202	164	204	8	5	5	11	507	483	397	304
1920	346	308	194	72	188	177	162	245	13	11	6	7	547	496	362	324
1919	286	274	169	66	156	148	123	214	18	11	5	3	460	433	297	283
1918	265	239	165	47	162	157	105	182	8	8	2	2	435	404	272	231
1917	223	213	120	40	148	135	98	150	6	5	4	4	377	353	222	194
1916	238	225	133	51	186	169	108	130	12	7	4	2	436	401	245	183
1915	197	192	127	30	161	142	111	118	5	4	2	3	363	338	240	151
1914	234	224	103	42	227	230	130	114	2	2	1	4	463	456	234	160
1913	315	279	121	24	323	323	162	81	4	3	1	2	642	605	284	107
1912	346	332	134	9	442	430	220	33	10	7	—	1	798	769	354	43
1911	356	338	122	2	388	382	213	22	4	4	—	—	748	724	335	24
1910	1,528	1,388	598	31	1,935	1,807	784	83	30	24	4	3	3,493	3,219	1,386	117
Total	26,242	24,424	17,597	8,702	31,533	31,550	23,648	22,141	1,134	1,005	573	486	58,909	56,979	41,818	31,329

A summary of Table 24 appears below (Table 25).

TABLE 25.—SUMMARY OF INJECTIONS GIVEN BY ALL AGENCIES DURING THE YEAR ENDING 31ST DECEMBER, 1962. (SUMMARY OF DATA IN TABLE 24).

First injections	58,909
Second injections	56,979
Third injections	41,818
Fourth injections	31,329
TOTAL	189,035

During 1962, there were two pleasing aspects. Firstly, the number of Local Boards of Health providing free poliomyelitis immunization facilities locally. Secondly, the enthusiasm of the Local Board officers in trying to get a high response rate from local residents.

The number of poliomyelitis immunization injections given during the year by the separate Local Boards of Health is shown in Table 26. This table sets out the number of injections given by each Board for each month of the year. (The number of injections are shown under the month in which the "Return of injections given" forms were received from each Local Board of Health, and not necessarily in the month in which the injections were actually given.) The table shows an increase in the monthly number of injections given by all Boards, from 5,219 in January, 1962, to 14,947 in December, 1962.

TABLE 26.—NUMBER OF POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN FOR YEAR ENDED 31ST DECEMBER, 1962, BY THE SEPARATE LOCAL BOARDS OF HEALTH

List of Local Boards of Health	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Metropolitan—													
Adelaide	—	—	—	—	—	—	—	—	117	165	51	—	333
Brighton	127	208	224	184	94	103	56	132	80	114	93	92	1,507
Burnside	Starting January, 1963				—	—	—	—	—	—	—	—	—
Campbelltown	Starting January, 1963				—	—	—	—	—	—	—	—	—
Colonel Light Gardens	—	—	33	—	4	17	—	13	9	18	11	10	115
Enfield	—	—	—	—	—	—	144	224	392	79	1,037	433	2,309
Glenelg	—	395	—	—	—	—	—	—	274	348	332	335	1,684
Henley and Grange	—	196	160	82	51	48	54	62	68	144	164	127	1,156
Hindmarsh	—	—	—	—	—	—	—	—	—	144	223	198	565
Kensington and Norwood.	Starting January, 1963				—	—	—	—	—	—	—	—	—
Marion	414	405	825	499	358	224	299	213	255	575	591	845	5,503
Miteham	126	282	272	87	—	—	—	—	184	—	734	—	1,685
Payneham	Starting January, 1963				—	—	—	—	—	—	—	—	—
Port Adelaide	487	—	921	327	178	122	297	256	456	388	1,221	2,426	7,079
Prospect	109	110	256	367	183	98	123	1,395	1,411	1,111	951	75	6,189
St. Peters	Starting January, 1963				—	—	—	—	—	—	—	—	—
Thebarton	86	—	172	—	350	169	62	70	54	107	77	84	1,231
Unley	—	95	175	130	80	83	120	62	83	133	194	242	1,397
Walkerville	—	—	—	—	—	—	—	—	1	6	18	23	48
West Torrens	170	182	105	107	121	107	100	87	165	168	185	208	1,705
Woodville	—	492	541	324	198	163	180	172	430	716	745	840	4,801
Country—													
Angaston	145	—	284	—	—	—	—	—	239	178	—	48	894
Balaklava	130	65	85	—	53	33	—	125	—	40	132	—	663
Barmera	—	77	—	—	—	115	75	—	215	1	—	—	483
Barossa	49	—	81	—	56	25	23	98	102	88	64	53	639
Beachport	Carried out by Millicent				—	—	—	—	—	—	—	—	—
Berri	150	128	58	—	—	—	—	—	—	263	203	—	802
Blyth	—	40	27	14	17	—	12	9	17	23	35	17	211
Browns Well	Carried out by Loxton				—	—	—	—	—	—	—	—	—
Burra Town	—	—	—	—	—	441	66	—	—	23	49	37	616
Burra Burra	Carried out by Burra Town					—	—	—	—	—	—	—	—
Bute	—	—	—	—	—	—	—	—	—	—	—	36	36
Carrieton	—	—	9	4	—	—	—	—	—	—	—	—	13
Clare Town	Included in Clare District				—	—	—	—	—	—	—	—	—
Clare District	97	—	162	174	59	—	—	22	133	121	63	—	831
Cleve	211	133	96	—	54	12	—	78	—	601	—	189	1,374
Clinton	Carried out by Yorke Peninsula				—	—	—	—	—	—	—	—	—
Coonalpyn Downs	44	97	146	83	24	18	—	31	—	74	—	97	614
Crystal Brook	—	29	58	70	40	18	9	—	—	39	143	225	631
Dudley	Carried out by Kingscote				—	—	—	—	—	—	—	—	—
East Murray	Carried out by Karoonda and Loxton					—	—	—	—	—	—	—	—
East Torrens Local	27	49	56	43	30	—	41	13	34	29	25	—	347
Elliston	—	—	—	58	97	—	44	16	—	12	17	—	244
Encounter Bay	—	—	—	162	109	—	—	—	—	—	—	183	454
Eudunda	—	—	261	—	—	—	—	—	—	—	208	443	912
Franklin Harbour	43	29	36	—	21	—	—	28	—	322	—	—	479
Freeling	—	—	—	97	82	—	—	—	—	—	46	105	330
Gawler	—	176	144	72	38	21	29	25	31	28	76	69	709
Georgetown	Carried out by Gladstone					—	—	—	—	—	—	—	—
Gladstone	—	94	—	80	33	—	—	—	—	294	—	320	821
Gumeracha	—	—	116	99	20	19	13	9	—	15	89	—	380
Haliett	—	—	—	—	—	96	431	—	—	—	—	—	527
Hawker	—	39	14	9	—	14	—	—	—	—	46	—	122
Jamestown Town	—	198	175	—	—	—	—	—	—	—	—	128	501
Jamestown District	—	—	58	—	—	—	—	—	—	—	—	—	58
Kadina Town	134	—	120	112	89	63	32	31	96	99	174	200	1,150
Kadina District	Carried out by Kadina Town					—	—	—	—	—	—	—	—
Kanyaka	Included in Quorn		—	—	—	—	—	—	—	—	—	—	—
Kapunda Town	Included in Kapunda District					—	—	—	—	—	—	—	—
Kapunda District	—	52	117	137	64	41	—	20	17	16	38	47	549
Karoonda	—	—	179	198	58	—	—	—	—	130	105	—	670
Kimba	76	71	55	45	32	—	19	7	29	35	72	—	441
Kingscote	119	—	122	91	66	39	—	87	90	65	1	66	746
Lacepede	—	—	247	210	30	—	27	—	25	—	—	—	539
Lameroo	82	—	116	—	77	8	15	33	36	27	37	32	463
Laura	—	—	44	56	41	44	32	90	114	153	—	88	662
Le Hunte	—	—	—	—	—	—	397	383	—	114	98	—	992
Lincoln	—	170	68	—	58	21	22	297	—	348	—	196	1,180
Loxton	—	215	—	331	—	225	—	—	171	—	—	—	942
Lucindale	—	70	—	71	—	—	—	—	—	—	175	209	525
Maitland	45	—	32	47	10	12	—	—	55	85	—	128	414
Mallala	—	37	112	107	64	59	—	10	20	68	139	—	616
Mannum	—	155	139	59	29	15	22	16	11	64	73	32	615
Marne	—	—	19	15	11	—	—	2	1	4	2	11	65
Meadows	—	—	12	52	72	—	9	—	—	—	—	78	223
Meningie	—	73	326	91	178	13	—	—	—	—	—	405	1,086
Millicent	—	146	541	—	242	53	63	76	—	123	213	295	1,752
Minlaton	—	124	115	120	50	—	—	93	—	—	150	93	745
Mobilong	Included in Murray Bridge				—	—	—	—	—	—	—	—	—
Moonta	21	16	—	24	19	11	9	10	11	10	9	8	148
Morgan	—	41	—	38	—	—	44	—	—	70	—	—	193
Mount Barker	—	537	540	62	32	—	—	—	—	—	—	110	1,281
Mount Gambier Town	575	24	812	14	750	420	—	490	614	25	—	765	4,489

TABLE 26.—NUMBER OF POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN FOR YEAR ENDED 31ST DECEMBER, 1962, BY THE SEPARATE LOCAL BOARDS OF HEALTH—*continued.*

List of Local Boards of Health	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Mount Gambier District ..	Included in Mount Gambier Town						—	—	—	—	—	—	—
Mount Pleasant	26	—	104	—	54	8	—	15	28	—	11	41	287
Mudla Wirra	17	41	34	—	27	11	16	13	—	44	17	15	235
Munno Para	37	86	91	50	26	17	18	17	26	46	43	49	506
Murat Bay.....	58	56	—	53	42	32	34	26	—	401	—	661	1,363
Murray Bridge	—	300	238	208	—	110	61	73	—	171	—	254	1,415
Naracoorte Town.....	240	306	—	403	84	—	128	—	228	851	—	517	2,757
Naracoorte District	Included in Naracoorte Town					—	—	—	—	—	—	—	—
Noarlunga	—	—	—	—	—	—	—	—	—	—	180	—	180
Onkaparinga	103	207	128	46	—	—	—	—	—	—	159	—	643
Orroroo	—	—	28	14	17	19	19	14	30	28	47	55	271
Owen	30	—	69	49	30	20	—	—	18	—	26	34	276
Paringa	Carried out by Renmark				—	—	—	—	—	—	—	—	—
Peake	—	24	49	51	17	—	—	—	—	—	—	86	227
Penola	—	113	85	56	58	55	64	34	64	89	80	69	767
Peterborough Town	84	141	176	76	—	—	—	117	—	—	—	279	873
Peterborough District ...	Included in Peterborough Town					—	—	—	—	—	—	—	—
Pinnaroo	—	49	—	157	23	44	—	—	18	18	88	68	465
Pirie	Included in Port Pirie				—	—	—	—	—	—	—	—	—
Port Augusta	—	—	301	348	203	98	85	66	—	321	417	340	2,179
Port Broughton	—	—	—	68	61	6	7	11	16	16	19	55	259
Port Elliot	—	—	—	147	149	—	—	—	—	—	—	—	296
Port Germein	52	47	38	42	23	—	11	16	41	78	107	119	574
Port Lincoln	—	256	263	111	271	85	65	103	90	130	150	—	1,524
Port MacDonnell	—	—	52	63	18	—	—	—	—	—	—	51	184
Port Pirie	—	—	—	288	243	—	—	408	—	1,804	962	—	3,705
Port Wakefield	13	—	38	23	19	7	3	13	—	17	21	7	161
Quorn	—	39	31	29	27	13	11	—	85	73	45	38	391
Redhill	25	—	21	13	6	6	13	19	45	41	39	39	267
Renmark Town	—	239	231	293	147	—	—	—	—	260	—	—	1,170
Renmark Irrigation Trust.	Included in Renmark				—	—	—	—	—	—	—	—	—
Riverton	29	—	37	38	16	13	156	—	—	112	122	—	523
Robe.....	—	—	95	74	6	—	—	—	—	—	—	—	175
Robertstown	—	—	57	—	57	—	—	—	—	—	50	—	164
Saddleworth	27	67	86	—	37	21	—	38	22	19	45	82	444
Salisbury	—	476	—	612	402	—	281	382	—	—	—	—	2,153
Sedan	—	—	38	26	—	—	—	—	—	—	51	19	134
Snowtown	—	—	196	—	—	—	—	—	—	—	122	—	318
Spalding.....	Carried out by Clare District					—	—	—	—	—	—	—	—
Stirling	79	129	144	109	58	62	67	—	58	118	111	77	1,012
Strathalbyn Town	—	74	209	19	42	5	—	—	—	—	—	179	528
Strathalbyn District	Included in Strathalbyn Town					—	—	—	—	—	—	—	—
Streaky Bay	45	96	—	53	—	—	—	—	—	188	—	440	822
Tantanoola	Included in Millicent				—	—	—	—	—	—	—	—	—
Tanunda	48	—	75	—	78	—	—	235	—	207	—	—	643
Tatiara	195	—	177	145	30	61	108	101	—	146	123	—	1,086
Teatree Gully	—	109	278	270	121	—	88	201	85	117	121	185	1,575
Truro	Carried out by Angaston				—	—	—	—	—	—	—	—	—
Tumby Bay.....	—	110	128	75	46	31	18	9	—	63	110	164	754
Upper Wakefield	30	—	23	27	—	12	4	—	—	5	35	10	146
Victor Harbour.....	—	—	—	135	119	—	—	—	—	—	—	—	254
Waikerie	32	152	—	124	—	93	—	—	117	—	—	121	639
Wallaroo	39	36	45	39	28	15	6	10	71	78	216	—	583
Warooka	—	95	23	—	—	—	—	—	—	75	27	—	220
Whyalla Town Commission	369	—	511	361	223	—	194	167	—	475	401	—	2,701
Willunga	Starting in January, 1963					—	—	—	—	—	—	—	—
Wilmington	21	—	6	5	—	—	15	—	20	—	—	6	73
Yankalilla	—	—	—	—	—	102	67	—	—	—	—	—	169
Yorke Peninsula	76	—	120	89	59	27	—	—	87	116	—	236	810
Yorketown	77	88	—	73	—	—	—	85	99	65	—	—	487
	5,219	8,586	13,491	9,814	7,189	3,943	4,408	6,958	7,288	13,975	13,054	14,947	108,872

The future work.—The introduction of the "Salk" immunization campaign in South Australia on 28th June, 1956, was hailed as one of the most important Public Health measures undertaken. The following three and a half years showed a remarkably high response for poliomyelitis immunization and a dramatic fall in the number of cases of poliomyelitis occurring in South Australia Gradually, there then emerged the view that poliomyelitis had become a thing of the past. The emergence of this view, side by side with the rapid growth of the population, resulted in a greater percentage of the community remaining non-immunized. This was to be expected. Usually with a successful immunizing agent, the decrease in the incidence of the disease is often accompanied, over a period of time, by a gradual falling off in the response rate for immunization. Then more cases occur. Future outbreaks of poliomyelitis are inevitable if people remain non-immunized. Serious outbreaks, in two other States, in the past two years show paralytic and fatal poliomyelitis, in epidemic form, is still a danger in the Australian community. There can be no slackening of poliomyelitis immunization efforts in the foreseeable future. The future activities of the Poliomyelitis Services Branch must be as intensive as before.

Medical Rehabilitation Work—The medical rehabilitation work with post-poliomyelitis patients from past epidemics is an established function of the Branch. It was continued throughout the year by the Principal Medical Officer (Poliomyelitis) and the Physiotherapist, Miss Marjorie Hill. It has two similarities to the immunization work of the Branch; firstly, in that it is extremely important and yet quite unspectacular; and secondly, that the satisfactions it gives are greater than the disappointments. There is more work available than can be done by the existing staff and this factor has prevented any extension of the work into country areas. There is staffing provision for a second physiotherapist, but filling the vacancy would be fruitless unless there was a temperamentally suitable physiotherapist, with the necessary skills, available: and, a medical officer interested in the problems of chronically handicapped people to work with her. It is understandable that many professional workers who would be interested and competent in the care of acute patients would be uninterested in, and therefore unsuitable for, the care of patients with long term disabilities. Particularly would this be so with the patients seen at the Poliomyelitis

Services Branch. They include patients who have ceased orthodox treatment years ago: patients who had had "treatment" from unorthodox or unqualified people and have no faith in any form of physical care: patients who may show improvement only after months of treatment—patients who will show no improvement, but for whom deformity must be prevented: patients whose disabilities must be accepted but who could be made more independent and "safer" people: patients who bring with them their frustrations of years of disability: and, patients whose emotional as well as physical needs must be met if working with them is to be successful. Also, medical rehabilitation work of the type carried out in this Branch involves not only the patient: it involves the parents too where a handicapped child is concerned. A child learns to come to grips with his handicap only through his immediate environment—his parents. He cannot achieve this if his parents have not come to terms with the disability themselves. Working with these particular patients and parents calls for a different kind of medical interest and orientation. It does not rest on a technique which can be "learnt" and applied successfully by someone without a genuine feeling for, and understanding of people who have unique problems. Nowadays it is widely recognized that with the neurotic, the emotionally disturbed, and the socially handicapped patient, a doctor needs considerable personal security, a special interest, and an ability to accept the patient and his problems with tolerance and understanding as well as skill if he is to be really effective. Similarly, special interest and personality traits are needed to carry out medical rehabilitation work in a particular situation like this one, particularly as there are no "acute-care" patients to vary the day. The extension of the medical rehabilitation work of the Branch must wait on the availability of another physiotherapist and medical officer with the peculiar mental and emotional set that the work demands.

5. TUBERCULOSIS BRANCH

The number of notifications of new cases of tuberculosis for the year was 242 compared with a total of 214 in 1961. In addition, five cases were notified from death certificates and eight cases transferred in from other States. Table 27 shows the source of all new notifications. Table 28 shows the age, sex and stage of disease. Table 28 "A" is a supplementary return showing age, sex and form of the remainder of the notifications.

Table 29 indicates the Local Board of Health origin of pulmonary tuberculosis and Table 29 "A" the origin of non-pulmonary tuberculosis.

Migrants.—There were 19 notifications of tuberculosis in migrants who had been in Australia less than five years. Table 30 shows the country of origin.

Mortality.—There were 35 deaths from pulmonary tuberculosis and one from tuberculosis of other forms. The following figures indicate the decrease in deaths from tuberculosis over the past five years:—

1958—6.66 deaths per 100,000
1959—5.43 deaths per 100,000
1960—4.02 deaths per 100,000
1961—5.05 deaths per 100,000
1962—3.64 deaths per 100,000

Table 31 shows the age and sex distribution of deaths from pulmonary tuberculosis during 1962.

Tuberculosis Allowance.—The number of persons on tuberculosis allowance at 31st December, 1962, further decreased. 148 persons were receiving the benefit at 31st December, 1962, compared to 171 at the end of the previous year. Table 32 shows the age, sex distribution and period in receipt of allowance.

Mass Miniature Radiography.—During 1962 a total of 162,175 persons were examined by miniature radiography as follows:—

Metropolitan Compulsory Surveys	89,743
Country Compulsory Surveys	51,687
City Static X-ray Unit	19,769
Northfield Mental Hospital	976
	162,175

Tables 33, 33 "A", 33 "B", 33 "C" show the findings from the above surveys. A total of 83 new notifications resulted from these surveys. Table 33 "D" is an analysis of the work of the City Static X-ray Unit showing the category of persons examined and the new cases found.

Chest Clinic.—Tables 34, 34 "A", 34 "B", 34 "C", are an analysis of the work of the chest clinic. Table 34 "D" shows the work of the Chest Clinic X-ray Unit.

Tuberculin Testing and B.C.G. Vaccination in the Schools.—Table 35 shows results of tuberculin tests of Australian born school children and Table 35 "A" of children born outside Australia. Tuberculin testing has only been carried out in the State schools but in 1963 the campaign will be extended to the same age group in all the metropolitan Catholic Schools.

Almoner.—There were 272 new cases referred to the Almoner and 400 old cases registered, making a total of 672 persons dealt with.

TABLE 27.—TUBERCULOSIS—SOURCE OF NOTIFICATIONS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

Source	Pulmonary		No. of N/P Cases
	No. of Cases	Percentage	
Mass community surveys	83	39·5	—
Private Medical Practitioners—			
(*a*) Direct 24			
(*b*) *Via* Chest clinic 20	44	21	9
General hospitals	34	16·2	16
Chest hospitals, annexes and sanatoria	11	5·2	3
Chest clinics	14	6·7	4
Repatriation clinics and hospitals	8	3·8	—
Death certificates	5	2·4	—
Transfers in	8	3·8	—
Special Groups—			
(*a*) Mental hospital surveys 1			
(*b*) Gaol surveys —	3	1·4	—
(*c*) Ante-natal hospitals 2			
Totals	210	100	32

TABLE 28.—NOTIFICATIONS OF PULMONARY TUBERCULOSIS FOR YEAR ENDED 31ST DECEMBER, 1962—NEW ACTIVE CASES (AND PROBABLY ACTIVE CASES)—SHOWING AGE, SEX AND STAGE OF DISEASE—SOUTH AUSTRALIA

Age Group	Males				Females				Persons				Total	Per Cent
	Min.	Mod. Adv.	Adv.	Death Certificate	Min.	Mod. Adv.	Adv.	Death Certificate	Min.	Mod. Adv.	Adv.	Death Certificate		
0– 4 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5– 9 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10–14 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15–19 ...	2	2 (2)	—	—	2	—	—	—	2	—	—	—	2	1·1
20–24 ...	3 (1)	3 (3)	—	—	—	1 (1)	—	—	2	3 (3)	—	—	5	2·7
25–29 ...	1 + 1	2 (2)	1 (1)	—	3 (3)	—	—	—	6 (4)	3 (3)	—	—	9	4·7
30–34 ...	5 (4)	1 (1)	—	—	5 (4) + 1	5 (5)	1 (1)	—	6 (4) + 2	7 (7)	2 (2)	—	15 + 2	8·1
35–39 ...	2 (1) + 1	5 (5)	—	—	5 (4)	4 (4)	—	—	10 (8)	5 (5)	—	—	15	8·1
40–44 ...	4 (4)	10 (9)	—	—	9 (5)	1 (1) + 1	—	—	11 (6) + 1	6 (6) + 1	—	—	17 + 2	9·1
45–49 ...	9 (9)	4 (4)	—	—	6 (1) + 1	3 (3)	—	—	10 (5) + 1	13 (12)	—	—	23 + (1)	12·7
50–54 ...	8 (5) + 2	6 (4)	—	—	5 (4)	2 (2)	—	—	14 (13)	6 (6)	—	—	20	10·8
55–59 ...	2	4 (3)	1 (1)	2	1 (1)	4 (3)	—	—	9 (6) + 2	10 (7)	—	—	19 + 2	10·2
60–64 ...	5 (5)	6 (5)	—	—	3 (1)	4 (4)	—	—	5 (1)	8 (7)	1 (1)	2	16	8·6
65–69 ...	1	3 (3)	1 (1)	2	3 (1)	—	—	—	8 (6)	6 (5)	—	—	14	7·5
70–74 ...	2	3 (3)	—	—	3 (3)	1	—	—	4 (3)	4 (3	1 (1)	2	·1	5·9
75– ...	3	2 (2)	1 (1)	1	2 (1)	—	—	—	4 (1)	3 (3)	—	—	7	3·8
N/S.	—	—	—	—	1 (1) + 1	3 (3)	2 (2)	—	4 (1) + 1	5 (5)	3 (3)	1	13 + 1	7·0
Total ..	47 (29) + 4	51 (46)	4 (4)	5	48 (29) + 3	28 (26) + 1	3 (3)	—	92 (58) + 7	79 (72) + 1	7 (7)	5	186 + 8	100
Per cent..	25·3	27·4	2·1	2·7	25·8	15·1	1·6	—	51·1	42·5	3·7	2·7	100	—

Includes transfers-in where signified + ... 8
Includes bacillary cases where signified ( ) 137

TABLE 28 "A".—SUPPLEMENTARY RETURN OF TUBERCULOSIS NOTIFICATIONS FOR YEAR ENDED 31ST DECEMBER, 1962—SHOWING AGE, SEX AND FORM—SOUTH AUSTRALIA

Age Group	Males				Females				Persons				Total	Per Cent
	Primary	Pleurisy with Effusion	Reacti-vated	Non-Pul-monary	Primary	Pleurisy with Effusion	Reaeti-vated	Non-Pul-monary	Primary	Pleurisy with Effusion	Reacti-vated	Non-Pul-monary		
0– 4	1 (1)	—	—	2 (1)	2	—	—	—	3 (1)	—	—	2 (1)	5 (2)	8·8
5– 9	3 (2)	—	—	—	1	—	—	—	4 (2)	—	—	—	4 (2)	7
10–14	1	—	—	—	—	—	—	—	1	—	—	—	1	1·7
15–19	—	—	—	1 (1)	1	—	—	1 (1)	1	—	—	2 (2)	3 (2)	5·3
20–24	1 (1)	—	—	2 (1)	—	—	—	4 (2)	1 (1)	—	—	6 (3)	7 (4)	12·3
25–29	—	—	—	—	—	—	—	4 (4)	—	—	—	4 (4)	4 (4)	7·0
30–34	—	1	—	—	1 (1)	—	—	2 (2)	—	1	—	4 (3)	5 (3)	8·8
35–39	—	—	—	3 (3)	—	—	2 (2)	1 (1)	—	—	2 (2)	4 (4)	6 (6)	10·5
40–44	—	—	—	2 (2)	—	—	1 (1)	—	—	—	1 (1)	2 (2)	3 (3)	5·3
45–49	—	—	—	2 (1)	1 (1)	—	—	—	1 (1)	—	—	2 (1)	3 (2)	5·3
50–54	—	—	2 (2)	—	—	1	—	—	—	1	2 (2)	—	3 (2)	5·3
55–59	—	—	1 (1)	3 (2)	—	—	—	—	—	—	1 (1)	3 (2)	4 (3)	7·0
60–64	—	2 (2)	2 (1)	—	—	—	—	1 (1)	—	2 (2)	2 (1)	1 (1)	5 (4)	8·8
65–69	—	—	—	—	—	—	—	1 (1)	—	—	—	1 (1)	1 (1)	1·7
70–74	—	—	1 (1)	—	—	1 (1)	—	—	—	1 (1)	1 (1)	—	2 (2)	3·5
75–	—	—	—	—	—	—	—	—	—	—	—	—	—	—
N/S	—	—	—	1 (1)	—	—	—	—	—	—	—	1 (1)	1 (1)	1·7
Total	6 (4)	3 (2)	6 (5)	18 (13)	5 (1)	2 (1)	3 (3)	14 (12)	11 (5)	5 (3)	9 (8)	32 (25)	57 (41)	100
Per cent	10·5	5·3	10·5	31·6	8·8	3·5	5·3	24·5	19·3	8·8	15·8	56·1	100	—

Includes bacillary cases where signified ( ) 41

TABLE 29.—PULMONARY TUBERCULOSIS 1962

SOUTH AUSTRALIA

Local Board of Health Origin

METROPOLITAN

Local Board Area—	Notifications
Adelaide	12
Brighton	2
Colonel Light Gardens	4
East Torrens County Board	23
Enfield	20
Glenelg	2
Henley and Grange	1
Hindmarsh	6
Marion	11
Mitcham	14
Port Adelaide	15
Prospect	2
Thebarton	7
Unley	10
Walkerville	1
West Torrens	6
Woodville	9
	145

COUNTRY

Local Board Area—	Notifications
Angaston	1
Balaklava	2
Barossa	1
Beltana (out District)	1
Berri	2
Cleve	1
Crystal Brook	1
East Torrens	1
Elliston	1
Freeling	2
Gawler	2
Leigh Creek (out District)	1
Meadows	1
Meningie	1
Mount Gambier Town	8
Naracoorte Town	1
Noarlunga	1
Onkaparinga	2
Port Augusta	2
Port Lincoln	3
Port Pirie	2
Quorn	1
Renmark Town	1
Salisbury	11
Stirling	1
Tea Tree Gully	2
Whyalla	3
Yorketown	1
	57

TABLE 29 "A".—NON-PULMONARY TUBERCULOSIS, 1962

SOUTH AUSTRALIA

Local Board of Health Origin

METROPOLITAN		COUNTRY	
Local Board Area—	Notifications	Local Board Area—	Notifications
Brighton	1	Mobilong	1
East Torrens County Board	4	Mount Barker	1
Enfield	4	Mount Gambier Town	1
Hindmarsh	2	Noarlunga	1
Marion	3	Port Pirie	1
Mitcham	2	Renmark Town	1
Port Adelaide	1	Salisbury	3
Prospect	1	Strathalbyn Town	1
West Torrens	2		
Woodville	2		
	22		10

TABLE 30.—TUBERCULOSIS—SOUTH AUSTRALIA—1962

NOTIFICATIONS OF MIGRANTS

Less than Five Years in Australia

Country of Origin	Notifications
China	1
England	3
Germany	1
Greece	2
Holland	2
Hungary	3
Ireland	1
Italy	1
Lebanon	1
Poland	1
Scotland	1
Ukraine	1
Yugoslavia	1
	19

TABLE 31.—PULMONARY TUBERCULOSIS—SOUTH AUSTRALIA

DEATHS, 1962

Age at Death	Male	Female	Total
35-39 years	—	1	1
40-45 years	1	—	1
45-49 years	1	—	1
50-54 years	2	—	2
55-59 years	8	—	8
60-64 years	4	—	4
65-69 years	5	1	6
70-74 years	2	1	3
75 and over	6	3	9
	29	6	35

TABLE 32.—TUBERCULOSIS ALLOWANCES—LOCATION OF ALLOWEES AS AT 31ST DECEMBER, 1962—SOUTH AUSTRALIA

(A)

Age	Receiving Treatment in Institution			Receiving Domiciliary Treatment		
	Males	Females	Persons	Males	Females	Persons
–19	—	—	—	1	3	4
20–24	—	1	1	5	1	6
25–29	1	1	2	4	3	7
30–34	1	—	1	3	3	6
35–39	4	1	5	7	—	7
40–44	6	1	7	6	4	10
45–49	3	—	3	12	4	16
50–54	4	—	4	10	2	12
55–59	3	1	4	12	1	13
60–64	5	1	6	4	1	5
65–69	4	1	5	2	1	3
70–74	6	—	6	3	1	4
75–	5	—	5	4	2	6
Totals	42	7	49	73	26	99

(B)

Period in Receipt of Allowance	Males	Females	Persons
Under 1 year	68	27	95
1–2 years	19	4	23
2–3 years	4	—	4
3–4 years	1	1	2
4–5 years	6	1	7
5–6 years	1	—	1
6–7 years	1	—	1
7–8 years	—	1	1
8–9 years	1	—	1
9–10 years	5	1	6
10–11 years	5	1	6
11–12 years	—	—	—
12–13 years	1	—	1
Totals	112	36	148

TABLE 33.—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

METROPOLITAN AREAS (EXCLUDING CITY STATIC UNIT).

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Prob. Active	Inactive	Suspect Active at 31/12/62	Other Conditions	
10–14	69	—	14·50	—	14·50	—
15–19	11,362	—	1·49	—	2·29	1
20–24	6,919	—	2·46	0·15	2·46	2
25–29	6,723	0·30	5·36	0·15	2·83	3
30–34	8,301	0·24	6·14	0·24	3·37	3
35–39	9,983	0·10	9·72	0·30	3·41	4
40–44	9,573	0·43	12·43	0·52	5·54	2
45–49	8,848	0·23	16·15	0·34	6·22	2
50–54	7,404	0·13	20·26	0·52	8·24	3
55–59	5,588	—	26·13	0·90	8·81	3
60–64	4,525	—	34·03	0·66	15·25	1
65–69	3,812	—	32·02	0·53	14·43	2
70–74	3,215	0·31	31·73	0·31	19·91	1
75	3,361	0·30	41·36	0·60	20·53	3
Totals	89,743	14	1,294	32	613	30

TABLE 33 "A"—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

COUNTRY AREAS

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Prob. Active	Inactive	Suspect Active at 31/12/62	Other Conditions	
10–14	22	—	—	—	45·50	—
15–19	4,468	0·22	1·34	—	2·46	—
20–24	4,902	0·20	1·60	—	2·86	—
25–29	4,535	0·22	3·08	0·4	3·52	—
30–34	4,788	0·21	2·92	0·84	1·88	1
35–39	5,010	0·20	7·25	0·60	2·35	—
40–44	4,925	—	6·70	1·03	2·64	—
45–49	4,525	—	11·27	0·65	4·19	2
50–54	4,192	0·48	12·14	1·20	4·32	3
55–59	3,687	0·28	13·02	1·12	6·78	—
60–64	2,982	0·33	16·09	0·66	11·22	1
65–69	2,697	—	17·06	0·38	13·35	—
70–74	2,212	0·45	19·89	—	12·15	—
75–	2,651	0·38	22·22	0·76	22·04	—
Totals	51,687	11	459	31	293	7

TABLE 33 "B"—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

METROPOLITAN AREAS—CITY STATIC X-RAY UNIT

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Prob. Aetive	Inactive	Suspect Active at 31/12/62	Other Conditions	
10–14	1,047	—	28·65	—	17·19	—
15–19	5,262	0·19	3·23	—	3·04	—
20–24	2,066	0·48	10·65	—	4·84	—
25–29	1,501	0·66	26·65	1·98	9·90	—
30–34	1,632	0·61	52·69	1·22	6·12	—
35–39	1,778	1·68	67·49	2·25	6·18	1
40–44	1,580	1·89	106·33	0·63	11·39	1
45–49	1,195	0·84	148·95	1·68	12·60	—
50–54	986	1·01	197·77	3·03	17·17	—
55–59	740	—	277·03	5·40	22·97	—
60–64	639	4·69	291·08	3·13	26·60	1
65–69	474	4·43	329·11	2·21	18·98	—
70–74	345	—	313·04	2·89	28·98	—
75–	524	1·91	225·19	5·73	26·74	—
Totals	19,769	18	1,629	26	197	3

TABLE 33 "C"—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

NORTHFIELD MENTAL HOSPITAL

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Prob. Active	Inactive	Suspect Active at 31/12/62	Other Conditions	
10–14	41	—	—	—	24·39	—
15–19	35	—	—	—	—	—
20–24	24	—	—	—	—	—
25–29	31	—	—	—	—	—
30–34	70	—	28·57	—	—	—
35–39	76	—	26·31	—	—	—
40–44	76	—	13·16	—	—	—
45–49	75	—	53·33	—	13·33	—
50–54	74	—	40·54	—	13·52	—
55–59	63	—	47·62	—	—	—
60–64	103	9·71	29·13	—	—	—
65–69	85	—	82·35	—	—	—
70–74	92	—	21·74	—	—	—
75–	131	—	22·90	—	—	—
Totals	976	1	30	—	3	—

TABLE 33 "D"—CITY X-RAY UNIT EXAMINATIONS, 1962—SOUTH AUSTRALIA

Categories	Number Examined	New Active Tuberculosis X-rayed Current Year	Active Rate per 1,000 Examined	Active Tuberculosis from Previous Years
Migrants (new arrivals)	3,047	2	0·65	1
Referred by private doctors	3,295	5	1·52	1
Commonwealth public servants	1,269	—	—	—
State public servants	448	—	—	—
Industrial groups	198	—	—	—
Volunteers	4,040	4	0·99	—
Teachers Training College	3,195	—	—	—
University students	814	—	—	—
Mantoux positive children and contacts	895	—	—	—
Inactive previous surveys—Re-X-rayed	2,568	7	2·73	1
	19,769	18	—	3

TABLE 34.—TUBERCULOSIS SERVICES—SOUTH AUSTRALIA

CHEST CLINIC ATTENDANCES FOR THE YEAR ENDING 31ST DECEMBER, 1962.

	Direct Referral by Private Doctor	Referral Resulting from Abnormal Mass X-ray Film	Contact of Known Case	Routine Examination of Police Recruits, Nurses, University Students, Etc.	Total
First visit to Chest Clinic	570	295	1,299	1,363	3,527
Previously attend Chest Clinic but first time in current year					9,432
Subsequent attendance in current year					20,724

	Adults	Children 16 Years and Under	
Total attendance for year ending 31st December, 1962	25,969	7,714	33,683

TABLE 34 "A".—TUBERCULOSIS—TUBERCULIN TESTS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

CHEST CLINIC

Age	*Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Excluding Previous B.C.G.		From Previous B.C.G.		No.	Per Cent
				No.	Per Cent	No.	Per Cent		
0– 4	860	860	—	6	0·7	448	56·7	366	42·6
5– 9	520	520	—	13	2·5	271	52·1	236	45·4
10–14	390	390	—	24	5·2	228	58·4	138	36·4
15–19	1,540	1,540	—	77	5·0	1,094	71·0	369	24·0
20–24	673	673	—	87	12·8	442	65·7	144	22·5
25–29	316	316	—	105	33·2	117	37·0	94	29·8
30–34	295	295	—	106	35·9	78	26·4	111	37·7
35–39	290	290	—	135	46·5	57	19·6	98	33·9
40–44	237	237	—	116	48·8	43	13·8	78	37·4
45–49	195	195	—	96	49·2	25	12·8	74	38·0
50–54	127	127	—	74	58·3	10	7·8	43	33·9
55–59	94	94	—	55	58·5	3	3·2	36	38·3
60–64	72	72	—	59	81·9	—	—	13	18·1
65–69	55	55	—	32	58·2	—	—	23	41·8
70–74	41	41	—	30	73·2	1	2·4	10	24·4
75–	28	28	—	20	71·4	—	—	8	28·6
Totals	5,733	5,733	—	1,035	—	2,857	—	1,841	—

* These are persons attending the Chest Clinic, either because of chest symptoms, or as contacts of persons with tuberculosis or for examination in association with employment involving tuberculosis contact, such as nursing.

TABLE 34 "B".—TUBERCULOSIS SERVICES—CHEST CLINIC

B.C.G. VACCINATIONS FOR PERIOD 1ST JANUARY, 1962 TO 31ST DECEMBER, 1962

Age Group	Vaccinations	Contacts	Others
0– 4	298	253	45
5– 9	135	118	17
10–14	82	68	14
15–19	383	29	354
20–24	89	18	71
25–29	39	19	20
30–34	57	29	28
35–39	44	20	24
40–44	23	10	13
45–49	17	9	8
50–54	3	3	—
55–59	4	1	3
60–64	1	—	1
65–69	—	—	—
70–74	—	—	—
75 and over	—	—	—
Totals	1,175	577	598

TABLE 34 "C".—TUBERCULOSIS SERVICES—CHEST CLINIC

RETESTING OF B.C.G. FOR PERIOD 1ST JANUARY, 1962 TO 31ST DECEMBER, 1962

	Retested	Post B.C.G. Positive	Percentage Positive	Negative Retested after B.C.G.	Percentage Negative
1st retest—2-3 months	945	912	96·5	33	3·5
2nd retest—12 months	387	368	95·1	19	4·9
3rd retest—2 years	376	357	94·9	19	5·1
4th retest—3 years	254	241	94·9	13	5·1
5th retest—4 years	209	202	96·6	7	3·4
6th retest—5 years	215	209	97·2	6	2·8
7th retest—6 years	191	184	96·3	7	3·7
8th retest—7 years	126	119	94·4	7	5·6
9th retest—8 years and over	283	274	96·8	9	3·2
	2,986	2,866	—	120	—

TABLE 34 "D"—TUBERCULOSIS SERVICES—SOUTH AUSTRALIA

Chest Clinic—Chest X-ray Examinations—Year ending 31st December, 1962.

Total number of chests examined by routine X-ray—13,367.

Of the above the following additional special X-ray examinations were made:—

Tomography	117
Sinus	42
Spine	26
Hip and Pelvis	3
Barium Meal	18
Ankle	1
Shoulder	5
Feet	1
Hand and Wrist	4
Ribs	1
Abdomen	3
Knee	3
Skull	2
Sternum	1
Gall Bladder	1
Legs	3

TABLE 35.—TUBERCULOSIS—TUBERCULIN TESTS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

AUSTRALIAN BORN—METROPOLITAN SCHOOLS

Age	Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Excluding Previous B.C.G.		From Previous B.C.G.		No.	Per Cent
				No.	Per Cent	No.	Per Cent		
0– 4	—	—	—	—	—	—	—	—	—
5– 9	6,941	6,941	—	57	0·8	26	0·4	6,858	98·8
10–14	6,727	6,727	—	209	3·1	107	1·6	6,411	95·3
15–19	116	116	—	12	10·3	13	11·2	91	78·5
Totals	13,784	13,784	—	278	—	146	—	13,360	—

TABLE 35 "A".—TUBERCULOSIS—TUBERCULIN TESTS FOR YEAR ENDED 31ST DECEMBER, 1962—SOUTH AUSTRALIA

MIGRANTS—METROPOLITAN SCHOOLS

Age	Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Excluding Previous B.C.G.		From Previous B.C.G.		No.	Per Cent
				No.	Per Cent	No.	Per Cent		
0– 4	—	—	—	—	—	—	—	—	—
5– 9	722	722	—	12	1·7	25	3·4	685	94·9
10–14	1,404	1,404	—	101	7·2	85	6·1	1,218	86·7
15–19	65	65	—	6	9·0	5	8·0	54	83·0
Totals	2,192	2,192	—	119	—	115	—	1,957	—

6. SUMMARY AND CONCLUSIONS

Notable events are recorded in the report of each Branch of the Department.

The decrease in notifications of hepatitis is so great as to indicate a real decrease in the impact of this troublesome disease. It is likely to be linked with the extensive survey and campaign against the housefly carried out by the Department and many Local Boards of Health.

Air pollution studies have continued, and results show a situation better than many, but one requiring more than advice to individual industries if a worse situation is to be prevented.

Drainage problems and costs increase with population. The study and design of common disposal systems for effluent from individual septic tanks is solving a difficult problem in many places at gratifyingly low cost.

Occupational health poses new problems in old and new industries. Safe handling of sources of radiation, and the host of new pesticides, are calling for and receiving increasing attention.

The growth of the school population calls for increased work both in examining children, and in supervising the health of student teachers. The most valuable form of health education is by taking part in the training of teachers who will pass on their knowledge and attitudes to children throughout the State. The importance of this work amply justifies the increasing time spent on it.

Notable improvements in child health have been seen in the decrease in defects of the teeth and in ear nose and throat conditions. The amount of dental disease, however, remains alarmingly high.

It is pleasing to record a return to substantial figures for poliomyelitis immunization, and to note the great activity of Local Boards of Health in this matter, so that people all over the State may be immunized without having to wait for a central unit to visit. The decrease in poliomyelitis cases is pleasing. There are still persons crippled in previous epidemics who need medical rehabilitation, and this work is continuing to prove valuable and necessary.

The further substantial decrease in tuberculosis mortality is satisfactory. Increased X-ray survey work is largely responsible for the greater number of new cases than in the previous year. The best index of decreasing impact of this disease is the continued decline in tuberculin-positive rates in children.

The co-operation of Local Boards of Health, particularly in environmental sanitation and poliomyelitis immunization, is again gratefully acknowledged.

The Board has again appreciated the work of its own officers and the staff of the Department of Public Health, and is grateful for the co-operation of a number of other Departments of Government.

We also express to you, Sir, our grateful thanks for continued help and support, and for your active interest in the work of the Board and the Department over so many years.

P. S. WOODRUFF, Chairman.

J. B. CLELAND
G. H. McQUEEN
C. WILLIAMSON
A. BERTRAM COX
} Members.

M. E. S. BRAY, Secretary.

Adelaide, 28th August, 1963.